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# THE

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## A Journal

## FOR THE CULTIVATION AND IMPROVEMENT OF PRACTICAL MEDICINE AND SURGERY.

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## PROSPECTUS.

THE Proprietors, in resuming the publication of the DUBLIN HOSPITAL GAZETTE, have much gratification in stating, that a considerable number of Physicians and Surgeons of the majority of the Dublin Hospitals have already co-operated to contribute materials for its pages; and they confidently anticipate that when the purpose of the Journal is fully understood, it will obtain a similar support from Physicians and Surgeons generally, not only in Dublin, but throughout the Kingdom.

The DUBLIN HOSPITAL GAZETTE will be mainly devoted to the cultivation and improvement of Practical Medicine and Surgery, through the publication of carefully recorded cases, with clinical observations, which otherwise might be forgotten or lost, or might be only applied to temporary clinical instruction, but which, preserved in the pages of this Journal, will form an authentic record, and accumulation of facts, that will constitute the best materials for future more lengthened and elaborate essays. Each Number will further contain a Summary embodying the most important discoveries in Medicine, Surgery, and the collateral sciences, as they appear in this and other countries.

It is scarcely necessary to observe, that with its exclusive appropriation to such objects, and deriving support from so many quarters where differences of opinion may exist, this issue of the DUBLIN HOSPITAL GAZETTE will rigidly follow the principle acted on in its preceding Series, of having no place for politics; nor will it admit any observations or discussions of a personal nature.

It is hoped this Journal will prove instructive to students, more especially of the Irish School, who may, in the perusal of its pages, be enabled to recall more vividly to their recollection many of those cases which have come under their own observation in their hospital attendance, and that, to members of the Profession, engaged in the laborious occupations of practice, its contents may not prove uninteresting, coming to them with the public stamp of hospital authenticity, and frequently from sources where they themselves had received their education.

The Proprietors hope that an Irish Journal, conducted on such principles, and with such objects, will obtain the approbation of the Profession; and they request that those who desire to give it their support will, at their earliest convenience, communicate to their Publisher their intention of becoming subscribers.

# MEATH HOSPITAL.

## *Case of Epigastric Neuralgia; with Observations.*

BY DR. LEES.

William Swan, ætat. 38, a stout, healthy-looking man, of temperate habits, and in good employment in Mr. Roe's distillery, was admitted, under my care, to the Meath Hospital, complaining of tenderness and intense pain on the slightest pressure in the epigastric region, over a space about the size of a five shilling piece, immediately under the ensiform cartilage. On the slightest touch of the hand his face assumes an expression of great agony, and is bedewed with cold perspiration. He says that he never experiences pain in the stomach, but that, after eating, he has been often obliged to lift his shirt from contact with the epigastrium, as the tenderness caused by even its apposition was intolerable, although it was not aggravated by increasing the pressure. The state of his general health and appetite is good; functions natural; tongue clean; bowels regular; no thirst, nausea, or vomiting. He does not suffer from flatulence, has no headach, but is very low spirited. The circulation is languid, pulse 56; heart's action feeble, but regular, and without any murmur; the abdominal muscles are in a state of constant tension, hard and rigid; there is no evidence of any tumour, nor abnormal pulsation in the epigastric region; neither pain nor tenderness in the back, nor in the course of the intercostal nerves. His easiest posture is on his left side, with the right leg drawn up. When he lies on his back, with the right leg extended, the spine is arched, so that the hand can be passed freely under it, but it becomes quite flat and in contact with the bed, on the leg being flexed. The urine is of a natural appearance, sp. gr., and reaction; no visible sediment, but on microscopic examination there are seen numerous very minute crystals of oxalate of lime aggregated in long masses.

He could not assign any cause for his complaint, except that he has been constantly employed in a very dusty meal-room, but he has neither suffered from cough, nor from any difficulty of respiration.

Tincture of aconite was applied over the tender part, but without any relief. I then ordered:—

℞ Infusi Valerianæ,
—— Cinchonæ, āā ℥iij.

Sumat ℥i. ter in die; a small blister over the part, and to be dressed with Acetate of Morphiæ ointment, gr. i. ad ℥i.

He was allowed meat every day, and advised to walk about and amuse himself. Under this treatment he rapidly improved, and was nearly quite free from his complaint when I resigned him to the care of Dr. Stokes. He, however, unfortunately relapsed, but was cured eventually by continuing the same medicine, and by the repeated application of leeches over the part. If the subject of the above case had been an unmarried female, I should have had little hesitation in regarding it as one of those anomalous forms of hysterical affection occurring in that class of persons; but I confess that, at first, I felt in doubt as to the cause of this man's sufferings. The superficial seat and character of the pain evidently showed that it was not gastralgia, while the absence of thirst and of fever satisfied me that there was no inflammatory action in the mucous membrane of the stomach. There was no evidence of inflammation in or under the skin, nor in the sheath of the rectus muscle, as occurred in a case under the care of Dr. Neligan, and which presented nearly similar symptoms. My case was examined carefully for aneurism of the abdominal aorta, for disease of the spine, and for psoas abscess, as the peculiar arching of the spine in the horizontal position led us to suspect that there was some change of structure in these parts which might account for this occurrence; but the most careful investigation by Dr. Stokes and myself could not detect any evidence of disease there, nor in the circulatory or respiratory apparatus. I, therefore, came to the conclusion that it was a form of neuralgia, and the result of my treatment satisfied me that I was right.

Dr. N. Gueneau de Mussy, in a late number of the *Archives Generales*, has described a species of tenderness very similar to this, as frequently occurring in diaphragmatic pleurisy, but in the cases recorded by him the patient suffered from severe dyspnœa and orthopnœa, whereas, in my case, the respiration was tranquil. M. Beau has described a variety of rheumatism in the skin, which he terms dermalgia, and which bears much resemblance to this case, but differs from it in occupying a greater extent of surface, and in occurring chiefly on the extremities.

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## *Wounds of the Trachea and Larynx; with Observations.*

BY JOSIAH SMYLY, F.R.C.S.I.,

SURGEON TO THE HOSPITAL.

### *Wound of the Trachea; Patient's Life in imminent Danger from Hæmorrhage into the Bronchial Tubes of one Lung.*

Patrick T., aged 40, came to the Meath Hospital in the evening, to have a wound in the lower left side of the neck dressed. This was done by the resident pupil, and the patient was allowed to go away. He soon returned, with his neck greatly swollen; Mr. Smyly was sent for, and found the patient had sustained a small but deep wound, inflicted by the stab of a knife, which had entered the trachea, permitting the escape of air into the surrounding cellular membrane, thus causing an emphysematous swelling of the neck; blood also was expectorated; an alteration in the tone of the patient's voice was observed immediately upon the wound being inflicted.

The patient was deeply intoxicated. The dressings were removed from the wound, a cooling lotion ordered, and half an ounce of water of acetate of ammonia was given every half-hour.

The following day there was great difficulty of breathing; his lips were livid, there was hoarseness of voice and stridulous breathing. His neck is greatly swollen; the emphysema extends upwards on the lower jaw, and two inches below the clavicle. The respiratory murmur is clearly audible in the left lung, but is not heard in the right lung; both sides of the chest are clear on percussion; is expectorating blood. He was bled to ℥xiv. with immediate relief; was ordered Solut. Ant. Tart.

Fifth day.—Free from all urgent symptoms; respiratory murmur quite returned in right lung. Pulse quiet, emphysema disappearing.

This patient was dismissed in a few days after, quite recovered.

*Remarks.*—The occurrence of emphysema, and the filling of the bronchial tubes with blood, illustrate the danger of immediately closing wounds of the neck communicating with the trachea. The nature and extent of the wound were not at first manifest. The incision of the skin was not half an inch in extent, and was at least two inches from the trachea. When, however, the patient was brought back to the hospital, with emphysematous swelling of the neck, the nature of the case was obvious, all dressings were removed, and the propriety of enlarging the external wound was under contemplation; it was, however, determined to wait for more urgent symptoms.

The most alarming symptoms under which the patient laboured were those of suffocation, from the filling of the bronchial tubes of the right lung. The blood being confined there arose probably from the patient having lain without stirring off that side all night.

Dr. Watson (on Pulmonary Hæmorrhage, *Medical Gazette,* vol. ix. p. 623) mentions a case in which suffocation occurred from this passage of blood into the respiratory passages from an ulcerated opening into one of the lingual arteries. The bronchi contained a considerable quantity of that fluid.

*The following Case of Wound of the Larynx was treated on the principles just stated, and with the best results.*

C. M., aged 40, a pedlar, of intemperate habits, in a fit of despondency, attempted suicide, by cutting his throat. He was brought to the Meath Hospital, and was seen half an hour after the wound was inflicted. The man was faint and exhausted, but not from loss of blood; his breathing was difficult and interrupted, and had for some time to be maintained artificially by compressing the ribs, &c.

The wound extended across the upper part of the neck three inches and a-half, it passed into the larynx, between the os hyoides and thyroid cartilages, laying bare the posterior belly of the digastric muscle, and dividing the external jugular veins on both sides: no artery of any importance was divided. After half an hour, during which time artificial respiration, frictions to the extremities with the hands, &c., were assiduously used, the pulse returned, and respiration was carried on naturally. The patient was placed in bed, the head bending forward, but no dressings were applied to the wound.

Five hours after the wound was inflicted the lips were brought together by four points of suture, and a spirit lotion applied.

The following day all symptoms of prostration had passed off. Patient was disturbed at night by a cough. He complained of headach. Pulse 110; tongue white.

Hirudines xviij. tracheæ.
Capt. Cal. et P. Ipecac., āā gr. i. 4tis horis.
Mist. Pect., &c.

In a few days this patient was completely recovered, and was able to resume his occupation of a pedlar, having, however, to commend his goods to his customers in hoarser accents than before.

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## CLINICAL LECTURES AT ST. VINCENT'S HOSPITAL.

BY DR. O'FERRALL.

### *Abdominal Tympany; Hysterical or Mimotic Form; simulates Organic Disease; Difficulties of Diagnosis; Effects of Chloroform.*

Abdominal tympany is met with under various forms; it announces the meteorism of fever, and it accompanies many of the inflammatory and nearly all obstructive diseases of the alimentary canal. There is one form, however, which seems allied to the condition termed hysteria, but which presents some physical characters simulating organic disease, and which requires some patience and care, in order to establish a satisfactory diagnosis.

A girl, twelve or thirteen years old, is brought to you for advice, on account of supposed abdominal disease. You observe that she is pale, but not emaciated; that the abdomen projects unnaturally, and that her mode of progression is very peculiar. The chest is thrown back, the arms hang, the spine is remarkably curved, and the child walks exactly like a woman balancing a large ovarian tumour or gravid uterus. The usual percussion in the erect position will soon enable you to assure yourself that there is no dropsical effusion into the peritoneum.

You now proceed to examine the abdomen in the horizontal position. Expiration is imperfect, and the respiratory act becomes frequent and embarrassed as the examination proceeds. You remark that the tumefaction is not uniform: a shallow transverse depression running across, a little above the umbilicus, marks the abdominal swelling into two portions.

In a girl, aged thirteen, recently measured, the circumference of the abdomen across the upper portion was 32 inches; across the lower portion of the abdomen, 29½ inches; and across the middle, 27½ inches. The abdomen generally feels resisting, and remarkably elastic; the resistance at the right hypochondrium gives a sensation of a more solid nature, and in some instances pressure in this situation appears to make the patient wince. It deserves to be remarked, however, that the seat of sensibility is not always the same in different cases. Percussion over the lower half of the abdomen elicits a loud and prolonged resonance; over the left hypochondrium the tympany is short and more acute in tone, while in the right hypochondrium a distinct and marked dulness is afforded to percussion.

Now, with this evidence before you, to what conclusion can you reasonably arrive? There is no dropsy, and the existence of mesenteric or malignant disease appears opposed by the general condition and expression of the patient. Hepatic enlargement appears the most probable supposition. But the position in which the patient is lying, with the spine arched prominently forward, instead of receding from the pressure of examination, throws a difficulty in the way of this opinion. This want of accordance between the symptoms and physical signs leads you naturally to examine the thoracic cavity. You proceed to percuss the right chest from above downwards; percussion yields a clear sound down to, and even below the very margin of the false ribs. This solves the difficulty, and proves that the dulness in the right hypochondrium cannot proceed from enlarged liver, because, if this viscus was enlarged its increase in the upward direction would necessarily have compressed the lung, and produced dulness as high, perhaps, as the nipple.

But there is the hypochondriac tumour, what can it be? If not an enlarged liver, what is it? Why, manifestly, a displaced liver. There is dulness on percussion below the margin of the false ribs, where it ought not to be; and above the margin of the ribs, where it ought to be dull, it is clear. Something has evidently pushed the liver down from its place, and against the anterior walls of the abdomen: what can that be?

It is not anything contained within the cavity of the thorax. There is no evidence of either emphysema, pneumothorax, nor empyema; and if nothing within the chest has pushed down the diaphragm, in the manner indicated by the displaced liver, it is most likely that the diaphragm must have descended by its own contraction. It is difficult to imagine a strained contraction of a muscle, like the diaphragm, for long periods of time; but there seems to be no other means of accounting for the phenomena. And when we consider the many well authenticated cases of long-sustained muscular tension which have been recorded as having occurred in catalepsy, as well as in the so-called mesmeric condition, it does not appear unreasonable to suppose that such a persisting contraction of the diaphragm and abdominal muscles may be maintained in certain states of the nervous system, and produce physical signs similar to those I have described. Watchfulness is often a characteristic of this peculiar condition. In general, it will be found impossible to discover the patient in a state of sleep so profound as to render them unconscious of examination.

In a case of this kind, recently under observation in St. Vincent's Hospital, all other means of procuring temporary relaxation of the muscles having failed, it occurred to me that the cautious use of chloroform might be employed for this purpose.

This was done before the class of pupils, to whom, as an instance of abdominal tumour, the case was an object of peculiar interest. Being very cautiously employed, the chloroform was slow in its operation. The pulse remaining satisfactory, it was persisted in until a condition of sleep was produced. The most remarkable change now took place in the appearance of the abdomen. The recti muscles became relaxed, and sank backwards, until the surface of the abdomen became actually concave. The upper and lower tumours subsided, and now, on percussion, the dulness beneath the ribs was replaced by a moderate degree of resonance, and percussion on the lower ribs no longer sounded preternaturally clear; the diagnosis was complete. As soon as consciousness returned, the tumour was found to possess every character as before described.

Sir Benjamin Brodie has described a curious state of the voluntary muscular system, in which paralysis of the lower extremities was supposed to exist, but in which there is really only required a strong will on the part of the patient in order to develope the seemingly absent power. In practice we frequently meet with such cases, and there is reason to believe, with Sir B. Brodie, that the want of a strong will to execute the power is the essence of the morbid condition. It would be a curious subject of inquiry, whether a condition nearly opposite of the nervous system may not exist, in which, with scarcely a consciousness on the part of the patient, muscles known to be voluntary are capable of extreme and prolonged contractions, in defiance of all advice or persuasion, and to the manifest inconvenience, and even suffering, of the individual.

Cases like that here described are occasionally subjected to treatment, the result of erroneous diagnosis, founded upon a hasty or imperfect physical examination. I have known instances where the iodine plan was carried to its utmost limits, in the hope of reducing a supposed abdominal tumour. The treatment should consist of such means as are calculated to improve the general tone of the system and promote a cheerful temper; shower baths, calisthenic exercises, and exercise in the open air. The bowels are, in many cases, regularly moved, although the swelling persists, and terebinthinate purgatives have no effect upon it. I have known the lower swelling diminished by the rectum tube, but the return of the swelling almost immediately succeeds its employment. The chalybeate preparations are generally indicated by the state and appearance of the patient. Moral treatment is not without its influence; but nothing in this way will avail without obtaining the confidence of the patient in your friendly disposition towards them.

The physical diagnosis is, in those cases, that on which you must rely, to prevent your employing injurious remedies. Now, in a careless examination, physical evidence might create a difficulty; if limited to the abdomen itself, it might confirm any previous suspicion of the existence of abdominal disease; extending, however, the field of its application, physical evidence removes the difficulty, and throws a clearer light upon the physical condition of the organs. Physicians of large experience must be familiar with, and prepared for, such difficulties; but the student cannot have too many aids to guide him in his investigation of obscure disease.

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## JERVIS-STREET HOSPITAL.

### *Laceration of the Urethra in the Perineal Region; with Clinical Observations.*

BY JAMES S. HUGHES, M.D., F.R.C.S.I.

D. M'I——, æt. 36, a dairyman, of delicate appearance, and very intemperate habits, was admitted into Jervis-street Hospital, on the 19th September, 1852.

The patient, on the previous evening, whilst in a state of intoxication, ascended a ladder for the purpose of mending a breakage in the roof of his house, when, having lost his hold, he fell from a considerable height to the ground on his feet; but having then staggered, he again fell with his legs astride on the edge of a large mash tub. On becoming somewhat sober, towards morning, he found that he was bleeding profusely from the orifice of his urethra, and that his scrotum and perineum were hot and swollen, and of a dark, purplish colour. On endeavouring then to pass water, he found that he was incapable of doing so; in consequence of which, he consulted a medical gentleman in his neighbourhood, who tried to pass a catheter into the bladder, but without success; as the day advanced, the desire to pass water became more and more urgent, and, at three o'clock, he sought relief at the hospital. The bladder was then felt distended, reaching nearly to the umbilicus; there was a profuse flow of florid blood from the orifice of the urethra, which had completely saturated the patient's clothes; the perineum felt hot, tense, and full; there was a general ecchymosed appearance of the scrotal and perineal regions; the patient appeared blanched from the loss of blood, his extremities were cold, his pulse quick, weak, and wiry; he was in excruciating agony from the constant and almost involuntary straining to make water.

An ineffectual attempt having been made to introduce an instrument into the bladder, owing to the point of the catheter becoming arrested at the seat of injury, I immediately had the patient placed on the edge of a firm table, in the position for the lateral operation for lithotomy, and having introduced a full-sized catheter down to the lacerated portion of the canal, I then made a free incision in the line of the raphe, through the integuments and fasciæ of the perineum, on the point of the instrument. On turning out a quantity of coagulated blood the lacerated urethra was exposed to view, the canal being torn across transversely; a catheter was now introduced into the bladder, when over a quart of stale ammoniacal urine was drawn off. The patient lost but little blood during the operation. The catheter having been secured in the bladder, the man was placed in bed, and ordered a full opiate.

On inquiring into the previous history of the patient, it was ascertained that he had been in hospital on a former occasion, labouring under a diseased condition of the prostate gland, with chronic inflammation of the lining membrane of the bladder.

The instrument was retained in the bladder for some days after the operation; but irritability of that organ, accompanied by constitutional disturbance, having set in, the instrument was immediately withdrawn, and the patient was ordered hip baths, opiates, and mucilaginous drinks.

On the sixth day after the operation, the patient was suddenly seized with profuse and repeated attacks of bleeding from the wound in the perineum, which were, at once, in my unavoidable absence, controlled by my colleague on duty, Mr. Stapleton, by properly directed pressure, and other suitable means. On the seventh day, the hæmorrhage recurred, and as the bleeding then appeared to proceed partly from the bladder, and partly from the urethra, at the seat of laceration, the pressure was reapplied, and the patient was ordered large and frequently repeated doses of gallic acid, which soon completely arrested the hæmorrhage.

The patient is now rapidly improving in health and appearance, the wound in the perineum is nearly healed, and the irritability of the bladder has so completely subsided, that the man has been able to wear the instrument in the bladder for several days past, without any inconvenience, either local or general.

*Observations.*—Laceration of the urethra in the perineal region is worthy of most serious attention; for, if the accident is not promptly and judiciously treated immediately after its occurrence, it may and frequently has terminated in the death of the patient. At a more distant period, it may, if neglected, lay the foundation of a most intractable form of stricture of the urethra, which may, or may not, be accompanied by a fistula *in perineo.*

Laceration of the urethra may be the result of violence inflicted on that canal, either from within, or from without. Rupture from within is occasionally met with as a consequence of the forcible and injudicious use of instruments, or, as more rarely happens, it may be the result of the impaction of a sharp urinary calculus in the urethra; an opportunity of seeing such a case, I was lately afforded by Dr. Symes, of Kingstown. Laceration of the urethra from external violence is, fortunately, not a very common accident, even in hospital practice. It is occasionally met with, as the result of a violent kick in the perineum, a sudden tilting forward of a horseman on the pommel of his saddle, or, as in the case before us, by a fall from a height on the perineum, against some resisting substance; by any of which accidents, the urethra may be either completely or partially divided. The rupture may take place either in the transverse or longitudinal direction; the latter being the least common.

The urethra may be lacerated from within by the abuse of instruments, in any part of its course, from its orifice to the neck of the bladder; but when the laceration is the result of injury inflicted from without on the perineum, the rupture is usually situated in front of the triangular ligament. Sometimes the bulb of the urethra is completely cut across.

Laceration of the urethra in the perineal region, from external violence, may be met with under two very different circumstances; thus, the canal may be ruptured without a division of the integuments or fasciæ of the perineum, as exemplified in D. M'I——'s case; or, on the other hand, the laceration of the urethra may be accompanied by a more or less extensive division of the superficial parts.

Sometimes laceration of the urethra is the result of fracture of the bones of the pelvis, which, of course, adds considerably to the danger of the patient. At other times the bladder, as well as the urethra, is ruptured, which is usually a fatal accident.

The immediate danger to be apprehended in laceration of the urethra is, infiltration of urine into the surrounding structures. When a wound of the perineum communicates freely with a rupture of the urethra, then no lodgment of urine is likely to take place, but if the laceration of the urethra be unaccompanied by an external opening, or should an opening exist, which is narrow and valvular, then the occurrence of extravasation of urine must be anticipated. The following symptoms usually denote the occurrence of laceration of the urethra. When the patient recovers from the first shock of the accident, his attention is generally first directed to a flow of blood from the orifice of the urethra. The loss of blood in these cases varies from a few drops to several ounces; thus, in D. M'I——'s case, the hæmorrhage was so profuse, as not only to saturate the patient's clothes, but likewise to give him quite an anæmic appearance. The patient next, not infrequently, observes a fulness in the perineum, and experiences a sense of weight in that region, owing to effusion of blood into the cellular membrane of the part. A dark, purplish discoloration of the scrotum is now often noticed: all the foregoing symptoms were well marked in the present case. If a patient should, under the foregoing circumstances, have had time to try to pass water before surgical assistance shall have been procured, he will either state that he was totally unable to empty his bladder, or that, although he thought he had succeeded, to his great alarm he only observed a few drops, if any, to escape from the orifice of his urethra; and he will, probably, further state, that immediately afterwards he was seized with an intolerable scalding pain in the perineum.

When a case of extensive laceration of the urethra is unaccompanied by a wound of the integuments, and that the patient has propelled the contents of the bladder into the cellular membrane at the seat of rupture, the urine will first make its way into the cellular tissue in the perineum; but as the superficial fascia binds this region posteriorly, the urine can only pass forwards and upwards, it consequently makes its way into the cellular membrane of the scrotum and penis, causing great distention of these parts; not infrequently, if the case goes on uninterfered with, the urine ultimately makes its way into the cellular membrane over the pubes and in the groins: if such a case should continue unrelieved by prompt surgical treatment, the infiltrated urine, acting as a deadly stimulant, will excite unhealthy inflammation of the cellular membrane, and mortification to the extent to which the extravasated urine has reached. This destructive process is accompanied by well-marked local and constitutional symptoms, thus the patient is seized with heat, throbbing, and weight in the perineum and surrounding parts; the integuments of the scrotum become swollen, the rugæ being obliterated in a short time, the skin of the affected part assumes a glassy hue, and is pervaded by an erysipelatous blush, a group of appearances which have unfortunately, on more than one occasion, to my knowledge, led inexperienced practitioners into the fatal mistake of treating the patients for œdematous erysipelas. If a case of the foregoing description should be still further neglected, the penis will become enormously swollen, and twisted near its extremity, the prepuce acquiring a semi-transparent appearance; ultimately patches of dark livid spots will form here and there on the integuments of the penis and scrotum, nature endeavouring, through the media of these sloughs, to relieve herself from the infiltrated urine and deadened cellular membrane. The destruction of the tissues with which the urine comes in contact is generally so extremely rapid, that unless the surgeon is called in early, and conducts the treatment of the case promptly and efficiently, both in affording a free outlet for the urine already diffused, and at the same time takes the necessary precautions to prevent its further extravasation, the life of the patient may be forfeited.

The constitutional symptoms, in cases of extravasation of urine, are as well marked as the local; thus very soon after the accident the patient is seized with repeated and prolonged rigors, ushering in a form of fever which soon assumes the low typhoid character; the pulse becomes quick and wiry, the countenance wears a peculiarly sunken aspect, the eyes become suffused, and, if the case be unrelieved, the tongue will become brown and dry, the pulse falters; hiccup, followed by low delirium, now sets in, and the patient dies, either in a comatose condition, or is carried off in a convulsion.

Although, as I have already stated, extensive destruction and sloughing of the cellular membrane, as a general rule, follow extravasation of urine, cases have been recorded by Messrs. Bellingham, Hargrave, Wilmot, and others, in which, although extensive extravasation of urine had existed for some time, only a trifling amount of sloughing of the cellular membrane took place; and in the case of rupture of the urethra from impaction of a calculus which I, not long since, saw with Dr. Symes, and to which I have already alluded, although extravasation had existed for nearly twenty-four hours before the patient was first visited by Dr. Symes, and although the urine had forced its way into the cellular membrane of the scrotum, penis, and groins, yet little sloughing of the cellular tissue ensued. Whether in the latter case the youth of the patient, the previously healthy state of the urinary organs, the less acrid condition of the urine, and its freedom from alcohol, can account for this comparative exemption from destruction and subsequent sloughing of the cellular membrane, are questions which here suggest themselves.

If, in extravasation of urine, the patient seeks timely and proper assistance, his life may be preserved, and the destructive process may be arrested; thus I have seen, in more than one apparently hopeless case, the patient rescued from impending death by prompt and suitable treatment.

In forming a prognosis in a case of laceration of the urethra, we must not only take into consideration the extent of the injury, the presence or absence of extravasation of urine, the age, constitution, and habits of life of the patient, but likewise the condition of the urinary organs previous to the infliction of the injury; thus in D. M'I——'s case, we were very guarded in our prognosis, in consequence of the patient having been some time since in hospital, labouring under disease of the prostate gland, and chronic inflammation of the bladder, and likewise on account of the man's intemperate habits.

I shall now consider the treatment to be adopted in cases similar to that at present in hospital, in which the laceration of the urethra is unaccompanied by a division of the integuments, and which has been followed by retention of urine. Obviously, the primary object of the surgeon should be to pass a full-sized catheter through the orifice of the urethra into the bladder, and draw off whatever urine may be lodged in the viscus: the introduction of the instrument may, in such cases, be often facilitated by directing the point of the catheter along the upper surface of the urethra, by which means, if the canal should have been lacerated on its inferior surface only, we will, in general, succeed in passing the instrument into the bladder: in cases of this kind rude force would only add to the dangerous position of the patient; here delicacy of touch, and lightness of hand, are indispensable qualifications on the part of the surgeon.

If the instrument has been passed into the bladder, and there should be no evidence of urine having been extravasated into the cellular membrane of the perineum, or elsewhere, the catheter must be retained in the bladder, with the view of carrying off the urine directly from that viscus, and thus preventing it from becoming extravasated into the cellular tissue at the seat of injury: here leechings to the perineum may be called for, the patient must be closely watched, to ascertain whether urine may be extravasated or pus formed, and then, but not till then, are we, as a general rule, justified in cutting down on the injured urethra. If, on the other hand, there should be evidence of extravasation of urine, we are imperatively called on to make, without delay, a deep and sufficiently extensive incision through the integuments and fasciæ of the perineum, to the seat of injury; a free outlet will thus be afforded for the urine extravasated, and, at the same time, its further infiltration prevented. The operation of the perineal section should be conducted in the following manner:—the patient having been placed on a table, in the same position as for lithotomy, the surgeon should pass a full-sized catheter down to the injured portion of the urethra, where it is to be held with steadiness by an assistant; the operator should then cut down through the mesial line on the end of the instrument, and lay bare the urethra; the catheter is next carried on into the bladder, and retained there by a suitable apparatus.

In D. M'I——'s case an attempt was made to pass an instrument into the bladder, through the orifice of the urethra, previous and subsequent to the patient's admission into the hospital, but without success, an occurrence which not infrequently happens in these cases, from displacement of the lacerated extremities of the urethra, either from the deposition of coagulated blood, or from muscular contraction.

If a case of laceration of the urethra should be combined with a wound of the perineum, and that an instrument cannot be passed from the orifice of the urethra into the bladder, from either of the preceding causes, if the patient be visited soon after the infliction of the injury, the distal extremity of the urothra, at the wounded part, can generally be discovered. Under such circumstances, the best method of managing the catheter is as follows:—Having first introduced it through the distal end of the urethra into the bladder, next pass a probe from the orifice of the canal down to the wound, by which means we can readily conduct the top of the catheter through the anterior part of the urethra, having accomplished which, of course the probe is withdrawn, and the catheter retained in the bladder.

In the treatment of laceration of the urethra, complicated with infiltration of urine, after a catheter has been passed into the bladder, and the effused urine liberated by suitable incisions, the constitutional treatment of the case must then be attended to, mucilaginous drinks in small quantities will be here of service, and camphor mixture, with opiates, frequently prove useful. When the sloughs are detaching, the patient will require to be supported by generous, light diet; at this stage preparations of bark, ammonia, &c., are indicated. The best local applications, when the sloughs are being detached, are poultices, either simple or medicated; in the advanced stages stimulating applications, such as the Unguent. Elemi Comp., are found most useful. In the subsequent treatment of cases of lacerated urethra, it is necessary to pass an instrument, from time to time, in order to keep the urethra free, one of the most intractable forms of stricture of the urethra being that which follows on a rupture of that canal.

Authors recommend us to retain the catheter in the bladder, in cases of laceration of the urethra combined with an external opening, until the wound in the perineum shall have been completely healed; but, in the great majority of cases, the presence of the instrument will, after a longer or shorter time, excite irritation of the bladder and constitutional disturbance, as occurred in the case of D. M'I——. Under such circumstances, we must immediately withdraw the catheter, and order the patient hip baths, mucilaginous medicines, and opiates, either by the mouth or rectum; when, under this mode of treatment, the irritability has perfectly subsided, the patient may be in a position to again tolerate the presence of the instrument, until the wound in the perineum shall have healed.

If the patient is able to bear the continued presence of an instrument in the bladder, it will be necessary to change it every third or fourth day, because in these cases catheters are liable to become rapidly encrusted at their extremities, and some instruments very soon give way under the combined influences of heat and urine.

The hæmorrhage which took place in M'I——'s case, on the sixth day after the injury, arose, in all probability, partly from the artery of the bulb having been involved in the sloughing process, and also possibly from some vessels in connexion with the diseased prostate gland, for the urine expelled through the catheter in the bladder was deeply laden with blood, and the hæmorrhage, which recurred on the seventh day, was not completely arrested until the patient was placed fully under the influence of gallic acid, at which time the presence of the acid in the urine was readily detected by the addition of any sesquisalt of iron.

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# WHITWORTH AND HARDWICKE HOSPITALS.

## *Case of Empyema; with Observations.*

BY J. T. BANKS, M.D.,

KING'S PROFESSOR OF PHYSIC, ETC. ETC.

*Reported by* MR. T. BARRY.

T. C., a labourer, æt. 22, was admitted into the Whitworth Hospital on the 11th January, 1853. He stated, on his admission, that he had been eight months ill, and from his account of the symptoms it was believed that he had laboured under acute pleurisy. During the latter part of his illness he had suffered from profuse perspirations at night. On inspection, the left side of the chest was manifestly enlarged, and, on measurement, was ascertained to be an inch and a-half in circumference more than the right, and over its entire extent the percussion sound was dull, there was total absence of vocal fremitus, and respiratory murmur was only audible at the root of the lung. The heart was displaced, its apex pulsated below the right nipple and somewhat to its sternal side. A systolic murmur was audible, and a well marked fremissement was perceptible on placing the hand over the region now occupied by the heart. The respiration in the right lung was loudly puerile. Some days after admission into the hospital he was attacked by acute bronchitis.

On the 26th of January, he complained of pain and tenderness on pressure, with a throbbing sensation at a point about two inches below the left nipple.

In a few days a tumour, with a distinct sense of fluctuation, was perceived at this point, and a second similar swelling existed lower down, between the eleventh and twelfth ribs; a third was also discovered at the base of the left scapula.

February 12.—The endocardial murmur had ceased. The difficulty of breathing, which at first had not been great, now became excessive, and the symptoms were so urgent that it was determined to perform the operation of thoracentesis.

On the 4th March, Dr. Hutton operated, and seventy-three ounces of thick, inodorous pus were removed. The lowest point was that at which the opening into the chest was made. During the operation it was frequently necessary to introduce a large catheter for the purpose of removing the masses of lymph which obstructed the canula. A severe dragging pain was experienced in the situation where the heart could be felt pulsating.

On the 5th of March no alteration had occurred in the relative measurements of the sides of the chest.

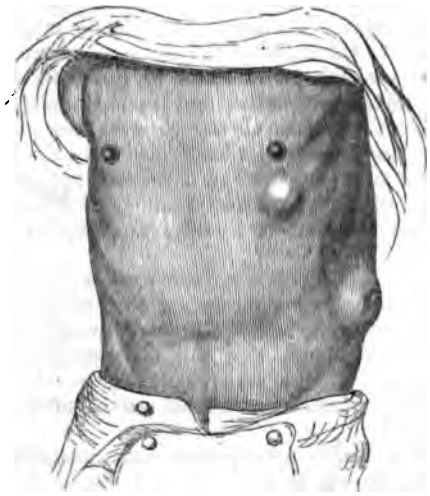
On the 8th of March, the left was found to be only three-fourths of an inch larger than the right. Thirty-eight ounces of fluid were removed on the 10th, and both sides were now ascertained to be of equal size.

The patient was transferred to Sir Patrick Dun's Hospital, in the hope of the change of air being beneficial.

During his residence in Sir P. Dun's Hospital, the abscess beneath the left nipple opened, and ulceration gradually extended, through which pus and sero-purulent fluid flowed; a second ulcer soon formed beneath the first, and on his re-admission into the Whitworth Hospital, on the 24th of August, purulent fluid was found to issue from these two openings, and also from the site of the operation.

The quantity discharged was considerable, amounting to at least a pint in the twenty-four hours, and it was now highly offensive in odour. On a fit of coughing, fluid occasionally gushed out with violence. Abscesses formed on the left fore-arm and arm, &c. Emaciation and debility rapidly increased, but he lingered until the 19th of October, when he died, worn out by the profuse purulent discharges, and by diarrhœa, which set in a few days before dissolution.

*Autopsy.*—The left side measured three inches less than the right, in circumference; it was one-third filled with purulent fluid; the left lung was compressed back towards the spine, but it was not covered with lymph or bound down by false membranes. The ulcerated opening below the left nipple communicated directly with the general cavity of the pleura. A fistula led from the superior edge of the seventh rib, close to the spine, to the abscess near the scapula. Two other fistulæ extended from the junction of the left crus of the diaphragm with the chest, beneath the psoas muscle, outwards and downwards, joining a fistula from the sub-scapular abscess, and finally opening at the lower points of ulceration of the chest. The right lung was emphysematous, and adhered firmly to the costal pleura by old adhesions. No tubercles could be detected in either lung. The pericardium was adherent to the heart, the apex of which corresponded to the junction of the right edge of the sternum with the ribs; the valves did not present the slightest trace of disease. No morbid alteration in any of the other viscera. The ribs, wherever laid bare by the sinuses, were roughened on their surface, and eroded to some extent.



Case of T. C., from a Drawing by Mr. Connolly.

I am induced to publish the foregoing case of pyothorax, from the fact of its progress being marked by incidents which are rarely encountered in pleuritic effusions which seek spontaneous evacuation. The first feature of interest is the site of the "empyema of necessity." The recorded experience of those who have enjoyed enlarged opportunities for observing disease, in all its varied forms, proves that the point selected by nature, in this case, for the fluid to approach the surface, was most unusual. Between the third and fourth ribs, or immediately beneath the clavicle, is the ordinary situation of the puffy elastic swelling, which indicates the coming forward of the effused fluid. That nature should prefer, so to speak, the upper part of the chest to the lower, which would appear so much a more favourable outlet, seems very unaccountable.

Of the many cases of empyema which I have seen, I cannot recall to memory a second in which it was necessary to perform the operation of thoracentesis at the *lowest* part of the chest. The next circumstance worthy of notice is the occurrence of more than one fluctuating tumour, to which an impulse was imparted by coughing, and which communicated with the pleura. In the majority of examples of pleuritic effusion, in which more than one abscess exists, presenting the characters of those I have mentioned, it will be found that the empyema is circumscribed, or in other words that the pleural cavity is partitioned into apartments which have no communication one with the other. A deviation from this law presents itself in the history before us.

In the exceptional cases of uncircumscribed empyema, in which a second outlet forms, it is almost invariably at a point lower than the first, but here the order was reversed. A phenomenon was observed in this interesting case, which, from its infrequency, attracted no ordinary amount of attention during the period it was present. I allude to a systolic murmur audible to the right of the sternum, where the impulse of the heart could be distinctly felt. That some disturbance, and some alteration of the heart's sounds, should always take place, as a consequence of its being dislocated from its normal situation, is what, if we had not proofs to the contrary, in a vast number of instances of ectopia cordis, we would reasonably be led to expect.

Dr. Stokes, in his admirable work on Diseases of the Chest, thus speaks on this subject:—"The experience of upwards of twenty cases has convinced me, that this dislocation of the heart, even when at its greatest degree, does not cause any alteration in the natural sounds of the organ."

There are, however, some rare examples of disease, in which it seems as if the heart did not quietly tolerate its change of place. Hope has recorded a case of dexiocardia, in which a murmur was heard with the first sound of the heart, which ceased on its being restored to its natural situation. More recently, Dr. Walshe has directed attention to this remarkable phenomenon:—"For many days, during the height of left pleural effusion, both sounds of the heart (pushed to the right of the sternum) were more or less marked by blowing murmur." Dr. Walshe thinks that the murmurs depended (probably through torsion of the aorta) on displacement of the organ. The same explanation is suggested by Hope: "Is it possible," he says, "that a twist given to the aorta, or pressure of the vessel against the ribs, may be the cause of the murmur?"

Larrey gives a case, in which feebleness of the pulse in the large arteries coincided with displacement of the heart. That twisting of the aorta is competent to the production of a murmur must be conceded; but another, at least, *possible* cause may sometimes be operative, viz. endocarditis: it is difficult, however, to understand such a combination of circumstances as is required to make this supposition plausible. The supervention of the endocarditis, and its subsidence without leaving a murmur behind, must be admitted in such cases as Hope's; the first coinciding with the moment of the heart's removal from, and the second with its restoration to, its natural position. I only throw this out as a possible contingency, which should not be altogether lost sight of.

In this case the murmur ceased, before the heart had returned to its natural position. That the murmur was not caused by spanæmia is evident, from the fact of its cessation not being coincident with any improvement in the patient's general state. From the period of the operation of thoracentesis up to the close of life, the pleural surface continued unceasingly to secrete pus in enormous quantity, and under this exhausting discharge, and that of the abscesses, he finally sank. I am persuaded, that to the operation in this case was due the prolongation of life; and the ultimately fatal termination, in the absence of tubercular disease of the lung, may be ascribed to the debilitating influence of the copious and long-protracted secretion of purulent fluid.

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## HARDWICKE FEVER HOSPITAL.

### *Internal Administration of Chloroform in Fever.*

BY DR. GORDON,

PHYSICIAN TO THE HOSPITAL.

The affections of the cerebral functions frequently assume great importance in fever; their derangement is sometimes indicative of disease in the respiratory apparatus, or in the digestive canal; more commonly, however, it is owing to the organic nervous influence produced by the fever on the brain or nervous tissue itself. One of the most prominent characteristics of this lesion is insomnia, causing, or, at all events, followed by delirium, subsultus, &c.

This complication, I need not say, is highly dangerous, and frequently proves fatal; in some cases the delirium becomes violent and excessive, and the patient, although greatly reduced, and with a very feeble pulse, seems endowed with supernatural strength, and leaving his bed, attempts to throw himself from the window, or is guilty of some other violence, all the time vociferating loudly, and sometimes expires suddenly before he can be replaced in bed, or immediately after lying down. At other times the patient seems incapable of making any muscular exertion, but the delirium and subsultus continue with frequent jactitation of the limbs, and all the other signs of over-excitement of a debilitated nervous system, and terminate in coma.

I have made numerous *post mortem* examinations of such cases, and the anatomical appearances in all have been so nearly alike, that they may be briefly described as consisting in congestion of the substance of the brain.

There are, perhaps, few complications arising in the course of fever which require so much decision and prompt treatment as when we find a patient advanced in fever having passed several nights without sleep, the circulation failing, and delirium subsultus, and other symptoms of great cerebral irritation existing.

This nervous irritation produces its peculiar effects on all the different portions of the animal frame. In the *pulmonary* system it produces frequent and irregular respiration. In the *digestive* it dries the tongue, removes all appetite for food or drink, and allows of involuntary evacuations; it causes continuous and irregular *muscular* actions, and these again, by their reaction, increase the nervous exhaustion, while sleep, the necessary means for procuring the restoration of nervous supply, is completely absent. With regard to such a case there are two axioms laid down in Dr. Corrigan's late work on Fever, which should be always remembered: 1st, "the loss of sleep, if it continue, is of itself sufficient to kill;" and 2ndly, "if even the shortest sleep be procured, some advantage is gained."

To procure this sleep, then, by means which will not do injury to the circulating or digestive powers, would appear to be the most rational mode of treating this complication, and the rapidity with which the symptoms of great nervous exhaustion subside, when once sleep has been procured, proves the soundness of this mode of treatment.

To the different means which have been made use of for this purpose, I would now add the internal administration of chloroform. I have used it with the happiest results when all other means had failed, and I can speak with confidence of its certain and speedy action. The following case affords a good example of its effects, and the mode of its administration:—

### *Reported by* MR. RICHARD ABBOTT.

Patrick Dempsy, aged 25, was sent from Santry to the Hardwicke Hospital, on the 8th of December; he was then eleven days ill of fever; his body was covered with dark-coloured maculæ; his pulse was 110, and very weak, his speech muttering and indistinct; he has subsultus in both upper and lower extremities. His head was shaved, he was ordered the bark mixture of the hospital, and half a pint of wine. Late in the evening he began to rave violently, and could not be induced to remain in bed; he was ordered large doses of hyoscyamus, and the back of his head was blistered; he was so violent as to require the use of a strait waistcoat all night.

December 9.—Has not slept since admission. Pulse 132; very weak. He continues constantly muttering and raving. Tongue dry and brown; eyes slightly suffused; head not very hot; respiration short, frequent, and irregular. He still requires the strait waistcoat to keep him in bed. He was now ordered twenty-five minims of chloroform in a draught, to be repeated in an hour.

After the second draught his agitation and restlessness ceased, and the waistcoat was removed. He dozed a little through the day, but only for a few minutes at a time. Towards night he again became restless and delirious; the same quantity of chloroform was again administered, and repeated in an hour, when he fell into a sound sleep which continued for nine hours. He awoke perfectly sensible; the subsultus had ceased, and his pulse had fallen to 100. He continued to improve, and in a few days was convalescent.

In this, and other similar cases, chloroform acted by producing anæsthesia of the sensory nerves, and exerting a paralysing influence on the muscular fibre; and this it appears to effect without depressing or deranging the nervous force, as is the case with sedatives in general, while it is altogether free from the objection of causing depression of the action of the heart, as is the case with some special sedatives. My colleague, Dr. Corrigan, has just treated a somewhat similar case by the internal administration of chloroform. I had an opportunity of daily witnessing the progress of the case; and, by his permission, I here append it, as

### *Reported by* MR. EDWARD SARGINT.

Denis Beahan, æt. 20, a porter from High-street, was admitted into the Hardwicke Hospital, January 4, 1854, the fifth day of his illness.

On the sixth day he was thickly covered with bright maculæ. His tongue was loaded, but moist; his pulse 112; respiration 22; no abnormal sound in the lungs; no tenderness of abdomen. He is reported not to have slept for two nights. His eyes are red and injected, and his head hot.

His head was shaved, and cold lotion applied.

Seventh day.—Pulse 116; respiration 28; slept but little.

Eighth day.—Pulse 120; very feeble; respiration 32. Ordered bark and wine.

Ninth day.—Pulse 126; very feeble; respiration 32; head hot; constantly raving, and getting out of bed; no sleep; subsultus of hands; tongue dry; great difficulty of utterance.

Vesicatorium nuchæ;
Eight ounces of wine.

Tenth day.—Pulse 130; weak; raving continually; difficult to restrain; requiring the strait waistcoat; constant talking; no sleep; tongue brown and dry in centre; thirsty; eyes very congested; pupils dilated.

Chloroform was now administered by inhalation, without any other effect than the pulse being slightly reduced in number. The patient was in no way quieted by it. Four leeches were now applied to the temples without any good effect. At 5 P.M. he took ʒss. chloroform by the mouth, and continued it every second hour till 11 P.M., when, as he did not sleep, and the delirium continued, he got same dose of chloroform every hour through the night. At 3 A.M. he was somewhat quieter, but the same dose was continued every hour till 8 A.M.

Eleventh day, 10 A.M.—Much quieter, but has not slept. Pulse 110; pupils natural size; subsultus nearly gone; tongue brown all over; sordes on teeth; bowels free; urine high-coloured, sp. gr. 1·020. Another dose of chloroform in same quantity was again administered; about twenty minutes after its exhibition he fell into a quiet sleep, which lasted for two hours. Shortly after waking, he took another half drachm of chloroform, when he almost immediately fell asleep, and awoke after several hours, much refreshed and quite collected.

His return to health was further indicated by the immense quantity of nitrate of urea, which an excess of nitric acid deposited from the urine.

In the above case the chloroform was longer in producing its effects than in any instance in which I have as yet used it. We learn from it, however, that we are not to be discouraged by the apparent failure of the first dose or two in procuring sleep, for, as in the present case, although actual sleep may not be at once procured, we may expect that a state of calm and quietness will be induced, which will soon be followed by "*Nature's sweet restorer, balmy sleep.*" We learn also from this case, that the inhalation of chloroform is, to say the least, useless in procuring sleep in cases of cerebral excitement in fever. I had, on one occasion before, in the Hardwicke Hospital, fully tried this mode of administering it; its inhalation was followed by general convulsive movements, very similar to an epileptic seizure, and I have not since administered it by inhalation in any similar case. Dr. Corrigan carefully tried the effect of inhalation three times in the above case; each time without any good effect.

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## ROTUNDA LYING-IN HOSPITAL.

### *Two Cases of Spasmodic Tic (?) in New-born Infants.*

BY ALFRED H. M'CLINTOCK, M.D., M.R.I.A.,

FELLOW OF THE ROYAL COLLEGE OF SURGEONS IN IRELAND, LICENTIATE OF THE KING AND QUEEN'S COLLEGE OF PHYSICIANS, EX-ASSISTANT OF THE DUBLIN LYING-IN HOSPITAL, ETC.

The diagnosis in these cases lay between paralysis and spasmodic tic, an affection so designated and first described, I believe, by Marshall Hall, and which Romberg calls "mimischer gesichtsschmertz"—a term which his translator, Dr. Sieveking, thus renders: "histrionic spasm of the face." The symptoms, carefully weighed and considered at the time, inclined me, and two very competent observers who saw these cases along with me, to the opinion that they were not examples of ordinary facial paralysis. Be this point as it may, however, they are still highly interesting, and have a direct bearing upon the subject of nervous pathology.

CASE I.—Mrs. B. was delivered of her first child, after a rather protracted labour. Ergot of rye was administered towards the conclusion, as the pains were very inert; the child, a well grown boy, was still-born, but by the employment of the ordinary restoratives was completely resuscitated. The next morning it presented the following appearances:—Upon the occiput and posterior part of the *right* parietal bone was a tumour, such as is commonly found after tedious labours. On the *left* side of the head, and corresponding to the temporal ridge, was a superficial yellow slough, about an inch and a quarter in length, surrounded by an inflammatory margin. As long as the child was at rest, no change in the features or symmetry of the face was observable; both eyes opened and closed nearly alike, at least, when in the former state, the lids of the right were, perhaps, a degree farther apart than those of the left. When the facial muscles were called into action, great distortion resulted on the *left* side—the corner of the mouth and *ala nasi* being drawn up and the eye tightly shut; at the same time the right side of the face was not utterly blank and void of expression, as we see it in paralysis. Local treatment was applied to the injury on the left side of the head, and in the course of a few days the wound put on a healthy appearance, and healed rapidly. A considerable improvement also took place in the distortion of the countenance, and at the end of a fortnight, when the child ceased to be under observation, scarcely any difference existed between the two sides of the face.

Case II.—A woman was delivered, after twenty-four hours' illness, of a fine healthy boy. At next visit the nurse called my attention to the child's face, which, on a first glance, seemed paralysed on the *right* side; a more careful scrutiny, however, altered this opinion. During the quiescent state of the features, no difference was discernible between the right and left sides; but when the child laughed or cried, then the muscles of the *left* side were thrown into strong action, and considerable distortion ensued. From the close similarity in the symptoms with those of the former case, I was led to examine the child's head: a small grey slough, surrounded by inflammation, was discovered on the integument covering the *left* parietal bone, near its anterior inferior angle. The treatment employed was purely local, and in the course of some days the facial muscles acted with undisturbed harmony.

Paralysis of one side of the face, apparently from compression of the *portio dura* in labour, has been frequently noticed. Osiander,* Landouzy,† and Evory Kennedy,‡ have each met with and recorded examples of this. In all such cases the paralysis was, of course, on the same side with the injury. Now, in the foregoing cases, the reverse was the fact, the seeming paralysis being on the side *opposite* to the injury. This circumstance, taken *per se*, is certainly not of any positive value as disproving the existence of paralysis (though it may serve to account for the opposite condition); but setting it aside altogether, and confining our attention to the *right*, or apparently palsied half of the face certain peculiarities were observable, unlike what is ordinarily seen in paralysis of the muscles supplied by the facial nerve, and tending to suggest doubts as to the actual presence of any such condition. For example, each patient had full command over the orbicular muscle of the right eye; in one instance, certainly, this eye was slightly more open than its fellow, but there was no other evidence of any impairment in the motor power of the orbicularis muscle. Again, in smiling, laughing, or crying, this same side did not at all present that blank, expressionless appearance which is so characteristic of a paralysed condition of the facial muscles; on the contrary, it struck us, on the moment, that the partial want of animation in this half of the face was owing to the undue and preponderating action of the muscles belonging to the other half. Subsequent and more mature reflection inclines me to think that this opinion has some foundation in facts, and is sustained by analogy, and I have headed this communication accordingly, as some denomination should be given to it; but I am far from asserting dogmatically that the *right* name has been selected. It is to be regretted that these cases were not reported more in detail, seeing that they involve so delicate a point of diagnosis; but, in fact, they occurred when I was assistant in the Lying-in Hospital, and I merely noted down, at the time, the salient features of each case. By a curious but not uncommon sort of coincidence, they presented themselves to my notice within a few weeks of one another, and no additional instance, of a similar nature, has since come under my observation.

---

# TETANUS SUCCESSFULLY TREATED BY CHLOROFORM.

BY GLASCOTT SYMES, M.D., F.R.C.S.I.,

ONE OF THE ATTENDING PHYSICIANS TO THE KINGSTOWN DISPENSARY.

On the 18th of August, 1853, I was called to visit a young gentleman aged twelve years, who was suffering much from paronychia of his left thumb, which I treated by incision. I did not see him again until the 25th of August, on which day I found him labouring under well-marked symptoms of tetanus; the muscles of the face, neck, and abdomen were permanently rigid, and the other well-known symptoms of tetanus were present. The treatment usually adopted in tetanus was immediately put in force; thus calomel and opium, &c., were perseveringly administered up to the 30th of August, but without any marked benefit, the disease still increasing, the spasmodic seizures becoming more frequent and violent; the muscles of the jaws were so rigid, the teeth were so completely closed, and the difficulty of swallowing was so great, that not even fluid nourishment could be given to the patient. In consultation with Mr. Cusack, it was determined to try the effects of chloroform inhalation, which I administered with much difficulty, owing to the violent resistance which the patient made; he inhaled a considerable quantity, and remained under its full influence for upwards of twenty minutes; after the anæsthetic effects of the drug had passed away, the boy was able to swallow a glass of wine without much difficulty, and from that moment he gradually but steadily improved, and on the 19th of October he was perfectly well. The paronychia was slow in healing, the nail was not detached until the patient had nearly recovered from the tetanic symptoms.

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* Handbuch der Entbindungskunst. Vol. ii.

† Brit. & For. Med. Review. Vol. x.

‡ Dub. Medical Jour. Vol. x. (Old Series).

I am fully aware that, in other hands, tetanus has been successfully treated by chloroform; thus two such cases have been lately detailed in the *Dublin Medical Press*. Every additional case is, however, in my mind, well worthy of being recorded, as it is only in this way that the power of chloroform, in certain cases of tetanus, can be made known to the profession at large.

---

## OXYGEN GAS IN CHOLERA.

*Extract of a Letter from* DR. THOMAS O'BRIEN, *Calcutta, to* DR. CORRIGAN.

"I regret to see that cholera is again in England, and I suppose has by this time reached Ireland. This awful scourge is always here, but the people do not at all think it contagious, and natives attacked by it are received into any of the hospitals, and placed with all classes of patients, either medical or surgical. The saline treatment seems to have obtained here, but I cannot say much for its success. I never give opium. I give calomel freely, combined with camphor. The mixture I give is sp. vin. camphorat., creasote, brandy, and soda water. I have always given oxygen gas, which I did when in the Galway union, where this treatment was equally successful, as you can see by my reports to the Board of Health. This gas is easily given by shaking powdered chlorate of potash on a heated surface, and making the patient inhale the fumes. When the vomiting is severe, I have found firing over the stomach and abdomen avert it, and produce heat; but the oxygen gas is that upon which I would place most reliance. Transfusion has been often tried, but without success. Should you have an opportunity of trying the gas, will you do so? and let me know the result. I always give as much cold water as can be swallowed, and where the evacuations are copious, I have injected chicken broth with O'Beirne's tube; this has sometimes been retained for a considerable time."

NOTE OF THE EDITORS.—Oxygen gas may be readily generated by intimately mixing chlorate of potash with one-sixth its weight of black oxide of manganese, and throwing the mixture on an iron shovel heated to dull redness.

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## PATHOLOGICAL SOCIETY MEETINGS.

### *7th January*, 1854.

DOCTOR LAW, in the Chair.

### *Disease of the Knee-Joint at an early Stage.*

MR. HAMILTON showed a diseased knee-joint, observing that it had little or no interest as a pathological curiosity, but it was valuable as exhibiting the early stage of white swelling. Most of the joints that had been exhibited in the Society, many by himself, were in a very advanced stage of disease; the joint full of shreddy, turbid synovia or pus; the synovial membrane much altered, thick, fleshy, ulcerated, or perforated; the cartilages more or less destroyed; the bone affected, or even in a still more advanced period, when fibrous or bony anchylosis had taken place.

A boy, nine years of age, was admitted into the Richmond Hospital, about six months since. He was lame of the left leg, with slight pain in the left knee. There were only very slight marks of disease, a little puffy, elastic swelling on each side above and below the patella, but no signs of effusion into the joint, which felt rather hotter than the other. Two days after admission, he complained of violent pain in the left sub-clavicular region. He was evidently suffering under an attack of acute pleuritis, well-marked frottement being audible over the seat of the pain; but it was also clear that the upper part of the left lung was the seat of tubercular infiltration, being perfectly dull on percussion, with the signs of a cavity at one spot, gargouillement, cavernous respiration and pectoriloquy. After the symptoms of acute pleurisy were subdued, he went through the ordinary course of chronic phthisis, and died on Thursday last. The more fatal disease seemed to have arrested the progress of that in the knee, which remained in *statu quo*. Even in the early stage of white swelling, we constantly find the knee flexed; here, however, it was kept perfectly straight.

When a section of the joint was made there appeared no increase or alteration in the synovia. The synovial membrane itself, however, exhibited a very good specimen of the effects of chronic disease; it was converted into a fleshy substance, of a yellowish pink colour. The whole of the membrane was affected by it, and it had even extended a little over the cartilages of the patella and condyles of the femur; with this exception, the cartilages were quite sound; no trace of ulceration. The disease, as far as the joint was concerned, consisted in a fleshy thickening of the synovial membrane. A section was made of the lower end of the femur, no tubercles were found, but the cancellated structure of the bone was redder, and, perhaps, a little softer than usual.

Both lungs were the seat of tubercles, a cavity in the left lung, in the upper lobe, and such firm adhesion, that the lung could be, with difficulty, separated from the pleura costalis.

### *Great Enlargement of the Spleen and Cirrhosis of the Liver, in a Boy fourteen Years of Age.*

DR. BANKS detailed the following case:—The patient was admitted into the Whitworth Hospital, on February 14th, 1853. He had been delicate for some time before admission, but gave no satisfactory account of his symptoms. He was of small stature, much emaciated and sallow; his abdomen was, however, exceedingly enlarged, resembling the appearance of advanced ascites; but on examination, the enlargement was found to be caused by an enormous spleen, which extended below the anterior spine of the ilium; the liver was also greatly increased in size, reaching lower than the umbilicus, and occupying the right hypochondriac and epigastric regions.

While under treatment in hospital, the spleen rather diminished, but the liver became larger, extending more to the left side. He had repeated attacks of epistaxis, recurring about every ten days, by which he generally lost from three to six ounces of blood. He never had hæmatemesis, or melænic discharges, as far as could be ascertained. The blood was examined by Dr. Lyons, and repeatedly, during the progress of the disease, by Dr. Frazer; but no excess of white corpuscules were at any time detected; it was, therefore, evidently, not an instance of leucocythemia; occasionally a few spots of purpura were observed, scattered over his body. For five or six weeks preceding his death, he complained of some uneasiness in his throat, which did not attract particular attention, until December 22nd, when he pointed out a tender, enlarged gland on the left side of the neck. Next day there was a diffused swelling around this part, extending to the front of the throat, and on the same evening, he became seriously ill, with symptoms resembling laryngitis. In the course of a few days the dyspnœa and stridulous breathing were much relieved by appropriate treatment, and the tumefaction in part decreased; still, the lower part of the neck continued swollen, especially at the left side. Fluctuation was carefully sought for, but was not perceptible at any time. After this temporary improvement, he rather suddenly, on the 6th of January, became delirious, towards evening he was comatose, and died the same day.

*Autopsy.*—The brain was softer than natural. There was slight effusion in the arachnoid sac and ventricles. An abscess was discovered in front of the trachea, under the sternal muscles, and below the thyroid body, containing thick purulent matter, somewhat diffused into the surrounding parts. The interior of the larynx was intensely vascular, and of a dark red colour; this appearance extended into the bronchial tubes. In the abdomen there was a great amount of disease; the liver was of large size, weighing upwards of 4lbs., and presented a remarkably good example of cirrhosis; the spleen was also of unusual size, very dense, being 1lb. 15oz. in weight, and was of a tough, granular consistence; the kidneys were also diseased, and rather pale and flabby, weighing nearly 9oz. each; there was very little fluid in the peritoneum.

*Remarks.*—The main features of interest in this most unusual case, were the occurrence of cirrhosis of the liver at so early an age, and the fact of the liver, at so advanced a period, being still enormously enlarged; it is also worthy of remark, that there was no dropsy, and the youth of the patient precluded the possibility of intemperate habits being an exciting cause of the disease. Though enlargement of the spleen is of frequent occurrence in obstructions of the portal system, it is, I think, rare to meet one so large. I perceive, by some recent researches of Professor Christiansen, that in all the cases of enlargement of the spleen which fell under his observation, there was hæmorrhage from the bowels, tormina and bloody evacuations, and on examination after death, blood was found in the intestinal canal. These symptoms were not present in the case I have brought before the Society.

### *Tumour of the Neck.*

Professor R. W. Smith exhibited a cast, along with the recent specimen of a tumour, which had been removed, after death, from the neck of a woman, æt. 65. She was admitted into the Richmond Hospital on the 30th of September last, in consequence of having received a fracture of the lower end of the radius. The tumour had existed for more than eleven years; it was situated upon the right side of the neck, and was covered in part by the sterno-mastoid muscle; it extended from about two inches and a-half above the clavicle to the angle of the jaw, and was of the size of a large orange; it was perfectly circumscribed, irregular upon its surface, and for the most part perfectly solid; but along most of its circumference were a number of distinct protuberances, evidently cysts, containing fluid. It was attended with pain, which, although never entirely absent, varied much in intensity, and yet scarcely any uneasiness was complained of when the tumour was handled. There were no diseased glands in the vicinity, the general health was good, and the tumour was freely moveable from side to side, but resisted any attempt to move it in the vertical direction. A remarkable feature connected with it was that it varied much in size from time to time; when at its maximum it reached upwards to the mastoid process and lobe of the ear, and forwards to the middle line of the neck; upon such occasions it was accompanied by a great increase of pain, and also by difficulty of breathing; but these symptoms were always relieved by puncturing the cysts, already alluded to, as studding the circumference of the tumour. They contained a clear and somewhat viscous fluid, and the punctures were several times followed by inflammation and suppuration of some of the cysts, and the subsequent formation of ulcers, with more or less of loss of integuments; but upon every such occasion the ulcers healed favourably, and without ever showing any tendency to the formation of a fungous growth. The ultimate result of these processes, established in the cysts, was a permanent diminution in the size of the tumour.

The question of operation was considered, but decided against; the chief circumstances which led to this decision being the advanced age of the patient, the manifestly deep relation of the tumour, its general freedom from pain, the absence of any injurious effect upon the health, and the disinclination of the woman to submit to any operation. Towards the end of December she was attacked with bronchitis and great irritability of stomach, which were relieved by treatment, but she died a few days since of suffocative catarrh.

Upon examination, *post mortem*, the tumour was found to extend deeply among the structures of the neck, its upper part was intimately adherent to the carotid artery, and a small portion had passed behind that vessel; it was solid throughout its whole extent, and seemed to have begun in one of the lymphatic glands. Examined under the microscope, it exhibited no trace of malignant structure.

## SUMMARY.—MATERIA MEDICA.

*On the Use of Tincture of Iodine, to prevent pitting in Small-Pox.*—Dr. Crawford, Physician to the Montreal General Infirmary, advocates the employment of a saturated solution of iodine in spirits of wine, as a powerful means of allaying irritation, and also of preventing pitting; he brushes the tincture freely over the face once or twice daily, from the earliest period of the eruption in which it is practicable, and directs this treatment to be persevered in during the maturation of the pustules. The earlier the application is commenced, the more efficacious he considers its influence over the disease; the immediate effect produced is pain, which speedily subsides, and the relief which then ensues to the sense of itching is so manifest, that of late he has extended its application more generally over the body. A series of cases, treated in this manner, are detailed by Dr. Crawford, occurring in his own practice and that of his friends; of which the most interesting is a return of an epidemic among the Iroquois Indians at St. Regis, in 1849, treated by Dr. Bergin: he states, that "the entire face was painted in eighty-five cases of confluent or semi-confluent small-pox, out of which only seven exhibited any marks, and those were slight; half the face was painted in seventy cases of grave disease, of these sixty-one were free from any marks on the painted side, five were badly pitted, four slightly on the painted side, while the unpainted side had numerous marks and pits, exhibiting a very striking and marked contrast." Three hundred cases, in all, came under Dr. Bergin's care, of which two hundred were very severe, either being confluent or partially so; there were but eight cases of modified variola observed. Twelve died during the epidemic, one of whom suffered from a hæmorrhagic type of disease.—*Montreal Monthly Journal*, Nov., 1853.

*Adulteration of Drugs.—Ferri Pulvis.*—Among the most important adulterations of drugs lately noted, is the asserted substitution of magnetic oxide of iron for the reduced iron of the pharmacopœia, or "*Ferri Pulvis.*" Both of these preparations are attracted by the magnet; but they may be readily distinguished by the pure iron dissolving in acids, with considerable effervescence, owing to the escape of hydrogen gas; and further, by its acid solution being precipitated of a green colour, on the addition of alkalies; whereas, the magnetic oxide dissolves in acids with only slight effervescence (if any, from the presence of impurities), and its acid solutions give a black precipitate with alkalies.

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# THE
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No. 2.—Vol. 1. FEBRUARY 15, 1854. Price 5d.

## CITY OF DUBLIN HOSPITAL.

### *Œdema of the Glottis, in the Adult, succeeding Scald of the Pharynx, from attempting to swallow a hot Potato; Laryngotomy; perfect Recovery and Discharge from Hospital in nine Days.*

BY JOLLIFFE TUFNELL, F.R.C.S.I.,

SURGEON TO THE HOSPITAL.

Cases of impeded respiration, from any cause, demand the most serious attention, but more particularly those which are suddenly produced, in which the surgeon is liable, at any moment, to be called on to preserve life, by operative interference. I consider, therefore, that such cases cannot be too generally or too fully reported, as in addition to possessing features of interest peculiar to themselves, every one, by its result, tends to solve the grand question of practical consideration, viz., the relative advantages to be derived from tracheotomy or laryngotomy, in each respective case. I give the following, therefore, in detail:—

James Kearnes, æt. 21, a healthy labouring lad, residing at Ball's-bridge, presented himself at the City of Dublin Hospital, at ten a.m. on the 11th of January, 1854, complaining of "a stoppage in the swallow." His breathing was regular, and he was suffering from no apparent distress. He stated, that, about an hour before, he had taken out of a pot a middle-sized potato, but finding it too hot to eat, instead of spitting it out, he tried to bolt it whole, when it became arrested in the pharynx, and threatened suffocation, causing also excruciating agony from the continued scalding heat applied to the parts around the glottis. He felt his condition becoming critical, and finding that he could not remove it by his fingers (introduced from the mouth), he grasped the throat with such force as not only dislodged the potato upwards, but broke it into two, and he shot the pieces out upon the floor. Conceiving, from the sensation continuing, that a piece still remained in the throat, he came up to have it removed. From his general appearance it was evident that nothing was now there; but to assure him, he was given bread to swallow, and, lastly, had a probang passed. Still, however, he was not quite satisfied, but went away, and continued at his labour through the day, returning home at five p.m. During the afternoon he felt a "huskiness" in his throat, and some uneasiness about the top of the windpipe. He did not take much notice of it, however, until sitting down to his tea, at six o'clock, when, on attempting to swallow, spasm set in, and he nearly fell from off his chair; he recovered from the immediate suffocation, but felt great distress in breathing, and as if he was being choked; his brother, who was with him, became also greatly alarmed, and they ran to the hospital as quickly as they could.

On arriving there his situation was urgent, the dyspnœa from spasm, œdema, and the act of running, combined, being extreme. Having been sent for, I arrived in a short time, but his condition was already much changed; the alarm had subsided, and his heart's action became much reduced, the breathing being regular, and (though somewhat obstructed) not such as to demand immediate interference. After removing all anxiety by assurance, I proceeded to examine the throat, and found the epiglottis erect, and the tumefaction extending all round. With a view to reducing the œdema and give vent to the serum effused, I passed down a guarded bistoury, and scarified the epiglottis fully, which afforded relief. He was then placed in a well-warmed ward, his feet immersed in a bucket of hot water, and he was desired to inhale steam freely.

Up to nine o'clock he continued doing well, when, on attempting to swallow, spasm again set in, and dyspnœa suddenly returned. He now grew rapidly worse, the countenance became anxious, and exhibited distress. The pulse, too, became intermittent, and there was no respiration audible beneath the clavicles.

Under these circumstances, I deemed it advisable to operate at once, and obtaining the sanction and approval of my colleague, Dr. Williams, performed laryngotomy by a vertical incision, inserting a full-sized trachea-tube through the crico-thyroid space. The operation presented nothing peculiar. It was performed by placing the patient on his back, and with rather a free incision *completely* exposing the crico-thyroid membrane, by dissection, before opening into it with the knife. This thorough division of the structure, and cleaning of the membrane, was done at Dr. Williams' suggestion, as he stated that he had often seen the branch of the thyroid, the inferior laryngeal artery, which penetrates this space, of such considerable size as, if wounded, to render it necessary that it should be tied, and in this instance his opinion proved correct, for on being divided it bled *very freely until secured.* The vertical opening into the crico-thyroid membrane was rendered sufficient for the introduction of the trachea-tube, by divaricating the edges of the incision by means of an aneurismal needle, inserted on either side. Speedy relief followed the operation; the respiration, previously inaudible with the stethoscope in either lung, was immediately free and forced, and the patient, in a few minutes, jumped from off the table and walked over to his bed.

The weather being at this time severe, and the temperature very low, the after treatment was directed to the prevention of bronchitis and its complications. The air of the ward was directed to be kept steadily at 62 deg.; the patient was ordered calomel and James's powder, a grain of each every second hour; the entrance of dust into the tube, or too free admission of air, prevented by gumming a piece of gauze along the margin of the jaws, and allowing it to hang like a veil over the wound and sides of the neck; whilst the whole surface of the chest and sternum was covered with soft tow, retained *in situ* by strips of plaster placed across, its object being to receive the secretion from the trachea, as ejected through the tube, and absorbing it, at once remove a fertile source of cold, viz., that produced by a wet linen shirt lying on the chest.

At midnight he was rather restless from mucus collecting in the tube; the pulse was irregular, at 63. The canula was thoroughly cleansed by a probe wound round with lint, after which the patient slept soundly for three hours.

January 12.—Same treatment continued.

January 13.—Mouth affected by the mercury; the powders, therefore, were discontinued. Patient now complained of pain in the posterior portion of the left lung at the angle of the scapula, and a sonorous ronchus was audible throughout the same extent; the pulse increased in frequency to 92. Eight ounces of blood were consequently removed by cupping from the affected spot, and James's powder, in grain doses, with five grains of nitrate of potash, ordered every third hour; the diet restricted to whey.

January 14.—Ronchus less audible, and the pulse reduced to 60; free diaphoresis having occurred, the powders were ordered to be stopped, and arrow root and milk allowed.

January 15.—Respiration very tranquil; the aperture of the canula was therefore plugged by a roll of lint; this caused no distress or even uneasiness, thus showing that the natural opening was again free.

January 16.—The canula withdrawn, and the wound closed by adhesive plaster.

January 20.—Wound healed; patient discharged cured.

This case, then, goes to establish the fact so strongly dwelt on by Mr. Prescott Hewitt,* viz., that when we have to operate for the relief of dyspnœa arising from acute affections of the larynx in the adult, it is sufficient to make the opening in the crico-thyroid space.

Mr. Hewitt draws attention to the great practical fact of the wide difference which exists in the condition of the parts in acute affections of the larynx, terminating in effusion, in the adult and in the child; "the effusion in the adult taking place by far most frequently in the submucuous tissue, whilst in the child it is usually poured out on the free surface of the mucous membrane. In the adult, then, the effusion is purely laryngeal; in the child it is not only laryngeal, but also tracheal."

This effusion in the submucous tissue of the larynx, we know to be almost invariably limited to the parts above the rima glottidis, and the explanation of this limitation, Mr. Hewitt says, "can easily be found in the anatomical structure of the larynx and trachea, by observing that above the inferior vocal cords the mucous membrane is connected to the subjacent parts by means of a loose cellular tissue, which is very abundant (especially in the region of the aryteno-epiglottic ligaments), whereas the connexions of the mucous membrane lining these chords and the trachea are very firm, the cellular tissue here being very short and very dense, forming so firm a bond of

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* *London Journal*, February, 1849.

, that it is difficult to separate the mucous
rane from the parts lying underneath

th effusion thus limited to the rima glot-
ınd parts around it, if dyspnœa should occur,
reason is there for resorting to tracheotomy,
laryngotomy will suffice? The delay,
ı is now so fatal in these cases, will not be
.tted, and precious time will not be wasted
administration of useless medicines, if ex-
ıce proves that the comparatively simple
tion of laryngotomy, *early performed*, will
relief. The proverb says delay is dangerous;
; certainly is so here.

drawing attention to the subject of opera-
for the relief of impeded respiration, and
g the propriety of recording all cases of
ind, I would make one suggestion, and
s, that in detailing particulars, the special
of *laryngotomy* or *tracheotomy* should be
yed, and the generic term of bronchotomy
pensed with altogether; for, anatomically
lered, it is incorrect, it does not imply the
n of the respiratory tube actually the sub-
f incision, whilst, used at random, it leaves
ader in doubt as to which operation has
been performed. The term bronchotomy
only to confusion, and should therefore be
ıged from surgical nomenclature.

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## STEEVENS' HOSPITAL.

### f Stricture and Fistula in Perineo, complicated with Calculus in the Urethra.

BY SAMUEL G. WILMOT, M.D.,

SURGEON TO THE HOSPITAL.

ac Baldwin, a pensioner, aged 30, of deli-
ppearance, was admitted into Steevens'
tal, for stricture of the urethra, which was
ned with a perineal fistula.

s man gave the usual history of the origin
rogress of the two-fold disease under which
oured; but stated that about three years
efore he perceived any decided obstruction
escape of urine, and a considerable time
to the formation of the fistula, he suffered
d deal from urinary irritation. At this
he was quartered with his regiment at
ich, and upon consulting one of the sur-
of that town, he was informed that there
calculus in his bladder, and that he should
go an operation for its removal: to this he
have submitted had it not been for the
n arrival of the route for Ireland. On his
sion into hospital he complained of great
lty in micturition, and I found a tight
re in the ordinary situation, through which
d, with difficulty, pass a gum-elastic catheter of No. 1 size: the urine was alkaline, and was loaded with muco-purulent matter and phosphates.

Having, by degrees, succeeded in dilating the urethra, so as to be able to pass No. 6 instrument, I tried a metallic catheter of that size, and it appeared more easy of introduction; but, while depressing it, I could feel a distinct grating sensation. I now introduced a probe through the fistula, and the same sensation became still more manifest.

The nature of the case was obvious; a calculus lay in the urethra behind the stricture; accordingly, I took immediate steps for its removal. A grooved staff being introduced into the urethra, an incision was made in the perineum, and the canal freely opened, when a calculus larger than an olive was extracted. The original size of the calculus must have been much greater; but, owing to its exterior being exclusively composed of phosphate of lime, it crumbled down considerably in the efforts at extraction.

The stricture was now quickly and completely cured, and the abnormal character of the urine removed; but the patient left hospital before the incision in the perineum had entirely closed. In about a year afterwards he applied for re-admission, complaining of all his former symptoms. After a few days, when the stricture was sufficiently dilated to admit a metallic catheter, I again experienced a grating sensation in the same part of the canal, and was enabled, as before, to confirm the impression thus communicated, by passing a probe through the fistula, which still existed. An operation similar to the previous one was performed, and a calculus as large, but much harder than the other, was, with ease, extracted. It was also composed of phosphate of lime.

*Observations.*—Calcareous deposits, in the form of a lining to the interior of the dilated part of the urethra behind an old and tight stricture, is not uncommon; but the discovery of a perfect calculus in that situation is rare. From the account given by the patient, we must infer that the first calculus was originally vesical, which was expelled into the urethra, and became arrested by the stricture. It thus lay behind the obstruction, its growth being favoured by the alkaline character of the urine and the presence of the fistula, through which the fluid passing slowly became filtered, as it were, permitting the ready deposition of its calcareous particles.

The second calculus was obviously formed in a similar manner. This case illustrates very well how a urethral calculus, complicated with stricture, can easily escape detection, because lying in a pouch or dilatation behind the constriction, and accordingly below the level of the remainder of the canal, no instrument can come fairly into contact with it until the stricture be nearly or altogether removed.

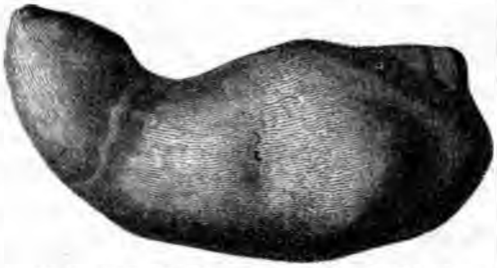
### *Case of very large Urethral Calculus in a Young Boy.*

John Kevin, aged 10 years, was admitted into Steevens' Hospital under Mr. Cusack, for stillicidium urinæ, which his mother stated had existed for a considerable time.

He presented a miserable aspect, the urine was constantly dribbling, being highly alkaline and abominably fetid.

On examination, a hard prominent tumour was found occupying the perineum, the skin of which moved freely over it; the tumour also projected towards the rectum so much as to render the wall of the gut quite thin and tense; and to convey the idea, at first, of its filling up a portion of the bladder as well as the urethra. Upon the introduction of a small metallic instrument into the urethra, it tilted against a calculous body.

A longitudinal incision was made by Mr. Cusack, in the centre of the perineum, which laid the urethra fairly open, and a calculus, of the size and shape represented in the accompanying woodcut, was extracted with great facility. The exterior of this calculus was composed of the triple phosphate and phosphate of lime. The large extremity lay in the prostatic part of the canal, and projected into the neck of the bladder. The boy recovered, but left hospital before the wound had completely healed.



Woodcut of the Calculus removed from John Kevin by Mr. Cusack.

In this case there was neither stricture nor fistula, as in the preceding; but it is most probable that the calculus had, as in the other instance, been expelled, while small, from the bladder into the urethra, where it grew and attained so remardable a size. It illustrates strikingly the power the urethra possesses in adapting itself to the accommodation of so large a body, and the extent to which the canal may become enlarged, even in a child, when the distention of it is gradual.

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## RICHMOND HOSPITAL.

### *A Case of ununited Fracture of the Humerus, successfully treated by the Insertion of Ivory Pegs.*

BY EDWARD HUTTON, M.D.,

SURGEON TO THE HOSPITAL.

*Reported by* Mr. Jack.

Thomas Whelan, aged 23 years, admitted Aug. 19, 1853, always enjoyed good general health; states, that in the beginning of February, 1853, he fell over the side of a waggon, and his left arm being caught between the wheel and body of the waggon, was broken, both fragments being driven through the skin; the lower end of the upper fragment anteriorly, three and a-half inches above the upper condyle, and the upper end of the lower fragment two and three-fourth inches above the outer condyle. He placed himself under the care of a bone-setter, who applied splints, and left them on for five days; when removed at the end of that time the arm was very much swollen and red about the joint, and at the seat of the fracture, on the back of the arm, the integuments "were quite black and dead." Three long incisions were made through the dead portion; the sloughs came away after some days, and the ulcers healed. Splints were again applied, and left on for a month: on their removal, the limb still felt very weak, and the elbow stiff; he began, however, to use the arm as well as he could. Two abscesses subsequently formed, one immediately above the inner condyle, the other at the point where the upper fragment had projected; they were both opened, and from the upper one a piece of bone half the size of his nail was discharged: both openings then healed, but there still remained a great amount of motion at the seat of fracture, and much swelling of the arm.

On admission to the Richmond Hospital (Aug. 19th), his arm was almost quite useless to him; he was unable to raise it from his side, and the motions of the elbow were very limited; the fractured humerus made an angle salient anteriorly, and retreating posteriorly. On the fore and outer part of the arm there was a quantity of callus thrown out, but there was, nevertheless, between the fragments a considerable amount of motion, which did not produce the sensation of crepitus.

In order to get the fragments into a better position, extension was employed every day for three weeks, for the space of an hour, and while extension was kept up by the pulleys, splints were applied, and bandaged on as firmly as they could be borne.

November 2.—The fracture still continuing ununited, and the patient's general health having so much improved as to place him in a favourable condition for the proposed plan of treatment, the following operation was performed:—The arm was forcibly extended, so as to remove deformity as much as possible, two incisions were made down to the bone on the outer and anterior aspect of the arm, just sufficient to admit of the entrance of a drill, by means of which two holes were made, two inches deep, each perforating both fragments, and, of course, the connecting medium between them; into these holes two ivory pegs, two and a-half inches long, and furnished with flattened heads, were driven; one of these passed readily through somewhat rarefied osseous structure; the other, which entered about an inch above and to the inner side, could not be driven farther than to the extent of the hole made by the drill (*i.e.* two inches), in consequence of the dense texture of this part of the bone at the time of operation; but a few days later it was easily pushed home, the bony structure having become soft and readily penetrated.

After the operation, water dressing was applied, and the whole limb placed in a cradle splint of open metal work, and kept at perfect rest; on the third day following, there was a slight amount of inflammation, the dressings were renewed, and the splints re-applied.

On the seventh day after the operation he began to suffer slight pain at the back of the arm opposite the fracture, and on the ninth day, a small abscess which had been formed was opened; this discharged healthy matter, and soon healed.

At the end of the seventh week the pegs were removed. The upper one remained unaltered, but the end of the lower one was absorbed, leaving a rough spiculated extremity, resembling the fang of a tooth in process of absorption. There was still slight mobility at the seat of fracture; splints were applied to the upper arm and firmly bandaged, and the whole limb was still kept at rest by means of an angular splint: this was continued for three weeks, when the arm felt quite firm, and the angular splint was removed.

January 12, 1854.—The elbow is still a little stiff; there is no perceptible amount of shortening of the limb; on introducing a probe into the openings the holes from which the pegs were removed seem to be filling up with bone; the swelling around the fracture has much subsided, and the arm is now very useful. He can lift heavy weights, and work with a shovel with strength and ease.

*Observations.*—In oblique fractures this mode of treatment seems to be particularly appropriate, as the ivory pegs being passed through the fragments bind them together closely, and keep them fixed. Being so inserted they excite vital action not only in the medium of connexion between the fragments, but in the bones themselves, as was manifested by the softening of the indurated osseous texture, owing to the absorption of the earthy particles, and by the absorption of the extremity of the ivory peg in the softer part of the bone.

It can scarcely be doubted, that the new bone which filled the trajet of the bored holes, passed through from fragment to fragment, and thus aided in cementing the union, which took place in an unusually short period, viz., seventy days from the date of insertion of the pegs; there was throughout little or no constitutional disturbance, nor was there any excessive local inflammation.

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The following case of ununited fracture of the femur, in which firm union ultimately took place under well-directed constitutional treatment, forms an interesting contrast with the foregoing:—

## *Case of ununited Fracture of the Femur cured by constitutional Treatment.*

BY PROFESSOR R. W. SMITH.

William Jones, a coach-trimmer, æt. 33, was admitted into the Richmond Hospital, January 27, 1851, with a fracture of the right femur, a little above its centre, sustained upon the 2nd of July, 1850. He stated that he had always been a healthy man, until the middle of the year 1849, when, during a residence in Glasgow, he was attacked with pain in the right knee, and extending from thence along the shaft of the femur. For this he was under treatment for six months, when, by the advice of his medical attendant, he returned to his native county of Roscommon. In April, 1850, he came to Dublin, seeking for employment; but shortly after, the pain in the thigh became so much worse, that he sought advice, when a fracture of the clavicle was discovered, united with much deformity, of which the patient had never been aware.

Upon the 2nd of July, while getting into bed, he placed his hands behind his thigh, to assist in raising the limb, when he felt the bone suddenly give way near its centre. This was followed by much swelling and great increase of pain for four months. Splints were kept steadily upon the thigh, and he was twice salivated, the fracture showing no disposition to unite. In each salivation the teeth became loose, and considerable bleeding daily took place from the gums. At the expiration of four months the fracture was still ununited. A starch bandage was also applied, for a time, without success.

In the end of January, 1851, as above stated, he was admitted into the Richmond Hospital, with the fracture still ununited, and the fragments admitting of being freely moved upon each other in every direction. He was pale and much emaciated, and his gums were soft, spongy, inclined to bleed, and separated from the teeth, which were discoloured and loose. These conditions I at first ascribed to the effects of the two courses of mercury which he had undergone. He was ordered full meat diet, together with porter and wine daily; and the entire limb was placed in a case of gutta percha, and a splint was also applied, which extended from the pelvis to the foot.

At the end of a fortnight (February 14th) he complained so much of the heat and perspiration induced by the gutta percha, that it was removed, and it was then found that numerous pustules had made their appearance on the thigh, some of which had degenerated into ulcers. One of these ulcers, which was nearly as large as a half-crown piece, bled freely, had a spongy surface, and a livid border. In short, its appearance was such as at once to induce me to believe that it was a scorbutic ulcer, and to lead me now to ascribe the bleeding and spongy gums, the loosened teeth, and the occurrence of the fracture, independent of external violence, to the existence of a scorbutic state of the system. Acting upon this view, I directed, in addition to fresh meat diet and fresh vegetables, a mixture containing citric acid. The ulcers were dressed with creosote ointment, and the limb was left without any apparatus whatever, not even a bandage.

At the end of ten days it was manifest that the process of union was going forward, and upon the 7th of March (exactly three weeks after the anti-scorbutic method of treatment had been begun) the lesion of the bone was fully repaired; the ulcers were almost all healed, the sponginess of the gums and their tendency to bleed had much diminished, and the teeth were becoming again firm in their sockets. A gargle of quinine and sulphuric acid was directed; the citric acid mixture was continued, and he was ordered to take in addition small doses of the citrate of iron and quinine. The long splint was now reapplied, and its use continued until the 16th of April, when short ones were substituted, and the man was allowed to go about on crutches. The acid mixture was discontinued, and he was directed to use two lemons in the course of each day. He was soon able to lay aside the crutches, and in the month of May he left the hospital perfectly well.

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## *Lectures on Diseases of the Anus and Rectum.*

### BY JOHN HAMILTON,

SURGEON TO THE HOSPITAL.

### *Abscess at the Anus.*

Andrew Carberry, æt. 28, was always healthy till ten days before admission, when he got a shivering followed by thirst, and a few days after by uneasiness about the anus at the left side, where he could feel a hard flag; it was very sore and became painful, so that he could not sit down easily, the only position at all comfortable being the recumbent. The swelling gradually increased, extending forwards, and becoming more prominent, but less hard. For the two nights previous to his coming to the hospital it was exceedingly tender and painful, quite preventing sleep.

There is a considerable swelling at the left side of the anus, and extending far forwards to the perineum; it is prominent but diffused; the integuments of a dull red colour, extremely tender, fluctuation can be felt obscurely in the centre, but it is generally hard.

Defæcation does not cause any particular uneasiness, but he is easy in no position but lying down.

January 9th.—Mr. Hamilton opened the abscess from one end to the other; the walls were thick. Half an ounce of pus came away, less than might have been expected from the size of the swelling.

January 25th.—He was discharged, the abscess having gone on without any further trouble, contracting gradually to a small, superficial, healthy sore.

Abscesses are not unfrequently met with by the side of the anus; the quantity of loose, fatty, cellular tissue, the depending position, and the proximity to the rectum, all tend, perhaps, to favour their formation. They are met with in the acute or subacute form, the latter much the more frequent. In the subacute, pain is felt at the side of the anus, amounting, at first, to little more than a feeling of uneasiness; this pain is increased by coughing, but not so much by the effort of passing a motion, contrary to what we would expect. At this stage the anus and adjacent parts look natural, but in feeling, at the painful side, with the point of the finger pushed upwards, a hardness will be felt high up, tender on pressure. At length, the side of the anus becomes swollen, redder and harder than natural, and finally, the tumour gets softer in the centre, but without well-marked pointing, and fluctuation is evident. These changes are usually preceded by rigor, and accompanied by more or less fever, depression of spirits, loss of appetite, and increase of local suffering. The patient walks with pain and difficulty, and in sitting is careful not to lean on the affected side, but bears on the opposite buttock.

Sometimes the progress of the complaint is much more acute, and the internal pain, preceding any outward appearance, much more severe.

The following case offers a well-marked example of this:—I operated on an army medical officer for ulcer at the anus, which had long caused him intense suffering; a fortnight after the incision through the ulcer he was well. He continued so for many months, and changed from the infantry into the cavalry. In June, 1850, I received a letter from him from Cork, where he was quartered:—"I am the most unfortunate fellow alive; I am again laid up with some disease of the rectum, but what I cannot tell. I was in bed, and most suddenly seized with the most terrific agonies in the rectum, a violent sense of bearing down, and a feeling of something in the part, and a desire to go to the water-closet, but difficulty to get to the place. My bowels had not been acted on for two days. At first, I thought a rupture of the rectum had taken place, so violent were the symptoms." He called in the assistance of two medical friends, who, he said, "examined the rectum to a considerable extent, but without finding the slightest signs of disease, no ulcer, no hemorrhoids." "I have continued in the most acute pain about the part ever since, notwithstanding all the remedies applied: such as gentle purgatives, hot hip baths, warm water enemata, opiate suppositories, and leeches to the verge of the anus; from which last I found the most benefit. This morning, as I was passing a small ball of opium, I fancied I felt an enlargement at the side of the anus, on the same side on which the ulcer was. It has been suggested to be likely to be violent spasmodic contraction and irritability of the rectum. But then it would not have lasted so long. I cannot sit, the pain is so acute, although no tumefaction of the parts is to be seen or felt, and I am now in such pain I can write no longer." I said that I did not believe it to be either spasmodic or neuralgic, but that an acute abscess was about to form at the side of the anus. A week after he wrote—"Your prognostication regarding my ailment has turned out quite correct, it has terminated in an abscess at the lower part of the rectum, which has burst, and discharged to a considerable extent, much to my relief."

Abscesses about the anus are sometimes of considerable size, extending from the coccyx to the perineum. They are usually confined to one side; they will break of themselves if let alone, either into the rectum, or more commonly externally. The opening is generally too small, and though a greater portion of the matter escapes at first, yet, what is secreted afterwards only imperfectly gets out, the abscess is prevented from closing, and a fistula is the result.

Now, as to the contents of abscesses about the anus: in some you will find the pus thick and healthy, yellow, or slightly greenish; but they have the same peculiarity that abscesses next mucous membranes elsewhere have—at the side of the mouth for instance, or in the ilio-cæcal region—viz., the odour is usually most offensive. The pus is certainly sometimes inodorous, but more generally has an odour correctly compared to that of garlic. The abscess also not unfrequently contains air.

In people of full gross habit, heavy feeders, and indolent, the abscess assumes a gangrenous character; it is most extensive, the integuments livid, the matter has a gangrenous fœtor; the cellular tissue dark green and sloughy, and there is much foul air. This last is sometimes so excessive as to gush out with violence immediately the abscess is opened. Sir Philip Crampton told, in his lectures, a case of this kind, which he opened at night, and where the puff of foul air was so violent and sudden that it blew out the candle held close to the anus by an assistant.

You will meet with abscesses by the side of the anus at any age, in children, adults, and old people; but in the first and last they are uncommon, the time when they most frequently occur being from 25 to 45. They may arise from many different causes; constipation of the bowels may act mechanically, the retained fæces pr ssing on the mesenteric veins which receive the returning blood from the hemorrhoidal, cause a retardation of blood in the latter, and a congestion of all the veins about the lower end of the rectum; at length inflammation ensues, encouraged by the abundance of cellular tissue, and finally abscess. Diarrhœa is another cause, by the irritation and repeated excessive calls to action of the rectum and sphincter, which irritation, being propagated to the cellular tissue about the anus, ends in abscess. The diarrhœa which occurs so constantly in phthisis may be one reason why these abscesses are so common in that disease, but they occur without any bowel attack quite as frequently, which may be explained, perhaps, in this way:—In phthisis, in proportion as the lungs become more diseased and less capable of disengaging the carbon from the blood, the liver takes on a vicarious action, becomes enlarged and fatty, with proportional turgescence of the portal system of veins and of the veins which enter into them, the inferior mesenteric and the hemorrhoidal, which last becoming congested, lead the way to the formation of abscess about the anus. Ulcers of the inside of the rectum, towards its extremity, no doubt cause the formation of abscesses, but not as frequently, I believe, as Sir B. Brodie conceives. I think also that M. Ribes is not right in saying that abscesses at the anus are most frequently caused by inflamed piles. They sometimes give rise to abscesses, but not frequently. Foreign bodies lodged at the lower end of the rectum, particularly such as are hard and sharp-pointed, by perforating the side of the bowel just in the *cul de sac* above the internal sphincter, cause an abscess, and so work their way out by the side of the anus. Authors give many instances where caries of the bones of the ischium and sacrum excite to the formation of matter either at the side or back of the anus; when this has broken, it terminates in a fistula, which will remain open for months or years, till the carious bone changes a diseased for healthy action, or if there is a piece of loose bone, till this is removed; the surgeon's principal duty in these fistulæ connected with diseased bone, is carefully to search for any detached pieces and remove them, any operative proceeding for their radical cure being out of the question as long as the caries lasts.

Now with respect to the treatment. In cases of phthisis, if the abscess is not very painful, it may perhaps be best left to nature to open. In certain instances the abscess below does seem to retard the progress of the fatal disease above. When there is much pain, a moderate sized opening may be made, soft poultices applied for a few days, and, as the discharge lessens, a small pledget of lint, smeared with white oxide of zinc ointment. In disease of the liver the same rule of treatment applies; the discharge from the anal abscess acts as a kind of derivative from the more serious disease.

When it is merely a local affection, our object should be, if we see the case so early that we have to treat it for the inflammation which precedes the formation of matter, to put it back, and prevent its terminating in abscess; and we are sometimes, though rarely, successful.

Mr. Newland, of Camden-street, brought me a young man who complained of pain at the right side of the anus, with such soreness on pressure that he could hardly bear to sit down; he suffered severely when he coughed. The anus and its margin appeared quite natural, but the point of the finger passing high up on the right side of the anus detected a hardness which was very tender on pressure. No pain at stool; but his nights were disturbed by uneasy sensations in the part. The pain was of a fortnight's standing. By leeching and mild purgatives, and friction with an ointment of mercurial ointment and extract of belladonna, the pain and tenderness, and finally the hardness, disappeared in less than a fortnight.

When, however, there are well-marked redness, swelling, and hardness, your efforts will generally fail; a few leeches to relieve pain, warm stupes and poultices, very gentle laxatives, and rest in the horizontal position, will alleviate. But little time should be lost in the use of these means; directly there are any signs of the presence of matter, an opening should be made, for when matter is once formed, from the soft nature of the structures by the side of the rectum, it is apt to spread upwards by the side of the bowel or round it, isolating the rectum, and forming a large cavity which may break into the bowel, and though attended with relief at first, finally end in a blind internal fistula, a troublesome complaint; or if the opening is tolerably large, after the pus is evacuated into the bowel, air, the secretions of the rectum, and fæcal matter enter the sac of the abscess, irritate and inflame it, and, after much irritation and pain, burst externally. For these reasons, therefore, an opening should be made tolerably early. Petit, who has written well on this subject, had a particular way of opening abscesses by the side of the rectum and anus. He introduced his fore finger into the anus; on his finger he passed a bistoury, with the point rather blunt, so as not to wound the finger; then he forced the end of the bistoury through the walls of the rectum into the abscess, and cut outwards and towards the tuberosity of the ischium, dividing the sphincter and opening freely into the abscess. A very free exit was given to the pus, and the sphincter being divided, little chance remained of the case terminating in fistula. Though this proceeding of Petit's contained the true principle of the operation, viz., to make a free opening, yet it is unnecessarily severe, and is liable to the objection of offering a cavity for the entrance of fæcal and irritating matters, which must delay the healing of the part. Besides it is unnecessary: a sufficiently large opening can be made along the side of the anus externally; the simple rule being, that it really be sufficiently large; for if the abscess is merely opened with a lancet, the same thing happens as where the abscess opens of itself, the aperture is too small, and as the matter re-accumulates, only partially allows it to escape. It therefore burrows in every direction where the resistance to its progress is least, opens into the rectum, or at some part externally, and finally terminates in fistula; but if the abscess is freely opened with a bistoury, the matter escapes as soon as it is secreted, and the sore soon closes.

Mr. M., æt. 28, of sedentary habits, complained of pain about the anus, increased by coughing, and as if something was in the anus like the pricking of a straw. The left side, verging towards the perineum, was rather harder than natural, the hardness deep-seated, and pressure directed upwards caused pain and made him shrink. He had only felt it for four or five days. The bowels were regular, and he had had no rigor; I, therefore, thought it worth while to try and put the threatened abscess back. Leeches, warm poultices, rest in the recumbent position, and gentle aperients were tried and failed. Three days afterwards the case had made such progress that the right side of the anus was red, soft, and fluctuating; but this last feel not extensive, it could be covered with the point of the finger: there was great tenderness.

I made a free opening with a sharp bistoury, and let out about an ounce of thickish matter, of a faint green colour and garlic odour. Three days after he was well.

A medical friend complained of some pain at the posterior side of the anus, chiefly on coughing; none on going to stool. I felt a slight induration, deep-seated and very tender, evidently the precursor of abscess. Two applications of leeches, cold lead lotion, and frequent poulticing, did not put the abscess back.

On the sixth day, finding the swelling of the posterior and lateral sides of the anus very distinct, I made a deep incision with a straight sharp bistoury and enlarged it with a probe-pointed one. A large quantity of healthy-looking pus was let out. On the tenth day he was well.

I relate these two cases, because they afford good examples of the rapidity with which abscesses in this situation heal up after large openings, contrasted with their tedious progress where they have been left to open of themselves, or have been opened by small incisions; under which circumstances, the termination in fistula is the usual result.

Free openings are even more necessary where the abscess is a gangrenous one, not only to let out the pus and dead cellular tissue, but to save the skin and arrest the spread of the disease. For, unless this is done, the skin over the gangrened cellular tissue mortifies extensively, adding greatly to the present danger, and to the future tediousness of the case, and discomfort of the patient. Great attention should be paid to draw out the dead portions of cellular tissue, as they become loose, or remove semi-detached portions with the scissors. The foul discharge should be carefully expressed with a sponge, and the part frequently fomented with chamomile decoction, and afterwards linseed meal poultices applied. I think poultices and fomentations are greatly to be preferred to what are called warm dressings, ointments of elemi mixed with turpentine, or yellow resin ointment, which were used by the old surgeons, as by some of the modern, on the mistaken principle, I believe, of stimulating the part to separation of the sloughs; while they fail in this object, they certainly add to the pain and irritation of the disease. Bark, quinine, and sulphuric acid are of use, and the patient will require to be supported by wine and good diet; for, though these gangrenous abscesses generally occur in people of full, gross habit of body, there yet attends them great vital prostration. A vigilant delirium is a frequent symptom, and requires full opiates, which are useful besides for a looseness of the bowels, which is another troublesome symptom often accompanying this form of anal abscess.

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# WHITWORTH AND HARDWICKE HOSPITAL.

## *On the internal Administration of Chloroform in the Treatment of Delirium Tremens.*

BY B. G. M'DOWEL, M.D.,

PHYSICIAN TO THE HOSPITAL.

The experience of every day furnishes us with additional illustrations of the remedial powers of chloroform, when administered internally, in the treatment of various diseases. I have myself seen the most marked benefit arise from chloroform thus employed in cases of acute facial neuralgia, of tetanus, of colic, and of delirium tremens: as a sedative in cardiac affections, I have likewise, under certain circumstances, found it beneficial; and of its occasional utility as an anodyne in fever, we have an illustration in the interesting communication of Dr. Gordon's, contained in the first number of this journal. I propose at present to notice briefly three cases of delirium tremens, lately under my observation, in which the power of chloroform in controlling the disease is strikingly illustrated.

### *Reported by* Mr. Shiel.

Case I.—James Kavanagh, æt. 33, admitted into the Whitworth Hospital, under Dr. M'Dowel's care, Nov. 12, 1853, labouring under delirium tremens in its fully developed stage. He had been ill for several days, and had not slept for the three days and nights preceding his admission into hospital. He was at this time in a state of the utmost excitement, suspicious of every one, and so exceedingly violent, that it was soon found absolutely necessary to have recourse to mechanical restraint. He talked incessantly; his eyes were much congested; extremities cold, and bathed in cold perspiration. Pulse soft, and of natural frequency. He had already had two attacks of a similar kind.

Chloroform was prescribed; half a drachm in a draught to be given every second hour.

After the fourth dose, he fell asleep. At first his sleep was frequently interrupted, and he awoke often, but soon it became more profound, and he slept all night. Next morning, we found him still sleeping, the pupils were somewhat contracted; on rousing the patient, we found that he was perfectly rational, and that no delusions of any kind remained. After getting some food, he again fell asleep, slept for nearly twelve hours, and awoke perfectly convalescent. Discharged November 16th.

### *Reported by* Mr. Shiel.

Case II.—Gore Sheerin, æt. 38, admitted into No. 7 ward, Hardwicke Hospital, Nov. 18, 1853. The first symptons of delirium tremens manifested themselves two days previously, when he became sleepless, and excessively nervous and apprehensive, whilst tremors affected his tongue and hands.

On admission, his manner was nervous and agitated. He was rational and collected in his answers, but, when left to himself, his mind wandered greatly, and he was unable to control his thoughts. The surface of his body was bathed in cold perspiration. The pulse was full and soft, there were remarkable tremors of the tongue and hands, and total loss of appetite.

*Treatment.*—Tepid affusion to the head. 15 minims of Tincture of Opium, in an ounce of Camphor Mixture, every third hour.

November 19.—Slept none last night; disease more fully developed; patient raves and talks incessantly, but is easily persuaded to remain in bed; tongue dry and furred; urine scanty and high-coloured; bowels confined; skin has ceased to perspire.

℞ Mist. Rosæ Catharticæ ℥iv. statim.
30 Minims of Chloroform every second hour, after the bowels are freed.

Towards evening the patient became so exceedingly violent, that the strait-waistcoat had to be used.

November 20.—Slept little during the night, towards morning he had some hours' sleep, and the medicine was omitted. He is rational and sensible, answers questions correctly, and is evidently disposed to sleep more; the pupils are somewhat contracted.

To have good beef tea during the day, and no medicine until the evening, when ʒi. of chloroform is to be given.

November 21.—Slept almost all night; and, with the exception of some nervousness of manner, no trace of the disease remains.

The anodyne powers of chloroform are well illustrated in the preceding cases, in both of which the disease was fully developed, and the nervous system in a state of high excitement. In the one case, two, and in the other, three drachms of chloroform, administered in half-drachm doses, at short intervals, were sufficient to subdue the functional excitement of the nervous system, and to induce sleep.

Sleeplessness is the principal source of danger in delirium tremens: the longer the system is deprived of sleep, the greater is the degree of nervous exhaustion, which too frequently terminates in death, preceded by convulsions. Hence, the absolute necessity of directing our treatment to this symptom especially, and the value of any remedy on which we can rely, for procuring sleep.

In detailing these cases, it is far from my intention to recommend chloroform in preference to opium, in the treatment of delirium tremens. There are, no doubt, many cases which will yield as promptly to opium, as did the cases here narrated to chloroform. But I conceive it may prove of great advantage to know that chloroform is capable of controlling the disease by its direct sedative and anodyne properties, for the following reasons:—

First; because there is a form of the disease in which opium is generally inadmissible; I allude to what has been termed the sthenic variety of delirium tremens, which is produced by the direct influence of stimulants, and is consequently more connected with active congestion of the brain, than the more common form of the disease, which is developed subsequent to the relinquishment of stimulants, and is consequently associated with a depressed condition of the nervous force. In the former affection, we generally rely upon purgatives, and the careful application of cold to the head; in some few cases leeches may be applied; but if these means fail in procuring sleep, much danger is to be apprehended; the exhibition of opium is hazardous, yet death will certainly ensue, if sleep be not obtained. Under these circumstances, I conceive chloroform may be given with the greatest advantage.

Secondly; because it occasionally happens, even in the asthenic form of the disease, that opium fails altogether to procure sleep, and seems to increase, rather than to allay the excitement of the nervous system. Under these circumstances, and especially when the tongue becomes dry, and the pupils are contracted, the use of opium cannot safely be persisted in. But in chloroform we have a remedy, which, from experience, I can confidently recommend to meet the exigencies of such a case: the following instance is adduced in illustration of this remark.

Case III.—In the month of September, of last year (1853), I attended, with Mr. Gorman of Henry-street, a gentleman of about thirty years of age, who laboured under delirium tremens for the first time. When I was summoned to see him, he had been ill for three days; the opium treatment had been most fully and properly employed, yet he had not slept for forty-eight hours; all the characteristic symptoms of the disease were fully developed: the patient never for a moment ceased talking, the activity of his mind was astonishing, and the mental delusions under which he laboured were of the most extraordinary and varied character. Tepid affusion was employed, and Morphia given in full doses.

On the following day, we found that he had not slept, and that his symptoms were in no way improved. At times he was very violent, but was easily persuaded to do as he was desired.

The next day found him still perfectly sleepless. It was now four days since he had had any sleep. He was so hoarse as to be unintelligible from incessant talking and vociferating; eyes congested; pupils much contracted; tongue dry, and protruded with difficulty; urine scanty; tremors of the hands and arms, with subsultus

n. His strength was evidently failing,
o longer struggled to leave the bed; the
d become smaller and more rapid. He
sinking from want of stimulants or of
nent, for both had been given in suffi-
antity, but death was impending from
sleep, and opium had been pushed to
rmost. Under these most unpromising
ances, I recommended chloroform to be
ternally; a drachm was immediately
nd repeated in an hour; soon afterwards
for a few minutes; a third dose, also
ng ʒi. was now given, and soon he slept
The next day, he was entirely free
ry symptom of the disease.
clusion, I have only to remark, that an
l experience is required to determine:
ther chloroform alone may be safely
in the treatment of delirium tremens;
comparative advantage of a mixed
t; *i. e.*, combining the use of opium,
t of chloroform; or 3. How far success
e rendered more certain by adopting the
eatment in the first instance, and follow-
by the administration of chloroform in
s.

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## OLOGICAL SOCIETY MEETINGS.

*January* 14*th*, 1854.

Mr. ADAMS, in the Chair.

### *Anchylosis of the Hip-Joint.*

OBERT M'DONNELL exhibited a specimen
losis of the hip-joint, the result of disease
g at an advanced period of life, and at-
y considerable enlargement of the head
mur and bone around the acetabulum.
ent died at the age of 72 years, having,
ars before, received an injury of the hip-
pposed to have been accompanied by
but on making a section there was no
of such an occurrence. The anchylosis
ently the result of disease in the articu-
re at so advanced an age.

### *pic Appearance of Tumour of the Neck.*

RONS drew the attention of the Society to
oscopic appearances presented by a tu-
the neck, exhibited by Professor R. W.
the preceding meeting, and alluded to
st number. It was found to present a
brous basis, and contained a number of
various sizes. Under the microscope
s observed a quantity of granular matter,
ls, blood corpuscles, free, and nucleated
ped together. Masses of a tubular ap-
were found in abundance, filled with
hese tubes Dr. Lyons considered to be
own tubes of glandular structure, leav-
doubt that the tumour had originated
rvical glands. Some calcareous matter
was likewise found in the structure of the mass.

### *Hey's Dislocation of the Thumb.*

**Mr. Adams** exhibited a cast of that dislocation of the thumb, in which the head of the metacarpal phalanx is thrown on the dorsum of the metacarpal bone. The difficulty in reducing this dislocation is well known, and was conceived by Mr. Hey to arise from tension of the lateral ligaments of the articulation. Mr. Adams observed that the opposite dislocation, that is, when the head of the metacarpal phalanx is thrown on the palmar aspect of the metacarpal bone, was also sometimes very difficult to reduce. In order to reduce such a dislocation as the cast represented, he thought the best mode of procedure was to increase the deformity by pressing back the thumb. Reduction was sometimes readily effected in this way when powerful traction had failed.

### *Syphilitic Disease of the Cranium.*

**Professor R. W. Smith** exhibited a remarkable specimen of syphilitic disease of the bones of the cranium. The calvarium presented a very remarkable appearance, being quite riddled with holes, and sievelike. Dr. Smith observed that the pathology of syphilitic diseases of bone was a matter still requiring much investigation. The previous history of the case was unknown.

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*January* 21*st*, 1854.

Dr. LAW, in the Chair.

### *Case of Spontaneous Varicose Aneurism.*

**Dr. Mayne** said he thought it necessary to offer some apology for bringing before the Society a case, the particulars of which had already been made public; but he felt assured that he would be excused in doing so, as the case was one of unusual interest.

Anne Flynn, aged 50, was admitted into the hospital of the South Dublin Union, on April 22nd, 1853.

She had been employed the day previously in scouring buckets, and whilst stooping for this purpose she suddenly felt as if strangled. So perfect was this illusion, that for some time she could scarcely divest herself of the belief that there was a ligature around her throat. At the same moment her face exhibited a remarkable change in colour, her breathing became greatly embarrassed, and she felt a sense of suffocation, accompanied by giddiness.

She spent a wretched night, not venturing to lie down, so great was her fear of suffocation.

This woman had been for the greater part of her life employed as thorough servant and laundress, situations which required much bodily exertion; her health, however, had been excellent up to her forty-fourth year, when, without any very assignable cause, she began to suffer from slight dyspnœa and palpitation of the heart on straining or making any unusual exertion, such as walking quickly, or going up stairs. She had never suffered from cough, but of late years, on two or three occasions, her breathing had become greatly oppressed, and she then experienced immediate relief from a moderate venesection.

The stooping posture which she was obliged to assume when washing was her chief difficulty, for it invariably produced puffiness of the eyelids, a swollen condition of the face and hands, and some embarrassment of the breathing.

On seeing this woman, my attention was at once arrested by her colour; it was that of cyanosis; her face was of a deep plum colour; so were her neck, her shoulders, and the upper parts of her chest. The contrast was very remarkable between these parts and the lower portion of the trunk and inferior extremities, which were pale in colour, and almost bloodless in appearance. The eyes were prominent—they appeared as if starting out of the orbits, and in both of them there was extensive sub-conjunctival œdema. The face, both sides of the neck, and the upper and anterior parts of the chest, were much swollen and puffy, so that the clavicles were fairly buried in the swelling.

The veins of the head, the neck, the upper extremities, and the upper part of the chest, were all enormously distended, and in many instances even varicose. The superficial jugulars (particularly the right) were turgid, and as large as the index finger. In a word, *all the tributaries of the superior vena cava* were intensely congested, and all the soft parts from which these tributaries spring were swollen and discoloured, whilst *the tributaries of the inferior vena cava, and the corresponding soft parts,* were perfectly free from the slightest trace of congestion, tumefaction, or discoloration.

The arterial circulation was apparently unobstructed; in both the radial arteries, and also in both the femorals, the pulse was full, strong, and about 110 in frequency; it had, however, the jerking character usually associated with aortic valve inadequacy.

Percussion and auscultation showed that the left lung was everywhere healthy: so was the right lung *posteriorly*. In front, however, the chest sounded extensively dull on percussion; the dull region extended from the sternal third of the right clavicle *above*, to within one inch of the right nipple *below*; anteriorly it was bounded by the left margin of the sternum: the sternal extremities of the three superior right ribs, the corresponding costal cartilages, and intercostal spaces, and the upper half of the sternum, were consequently comprised in this dull region.

At the sternal extremity of the second rib, on the right side, and along the adjoining intercostal spaces to the sternum, a very remarkable, heaving impulse was communicated to the hand as well as to the stethoscope; this impulse was single and systolic; it was also plainly visible when viewed sideways, and vastly exceeded, in point of strength, the impulse communicated by the apex of the heart itself. An extremely distinct *frémissement*, and a remarkably loud whirring *bruit*, accompanied this abnormal impulse. To the ear the *bruit* conveyed the sensation of being situated very superficially within the chest: it was single and systolic, and had its maximum of intensity at the costal cartilage of the second rib; there was scarcely any part of the chest, either anteriorly or posteriorly, at which this *bruit* was not plainly audible; but its intensity diminished exactly in proportion to the distance from the costal cartilage of the second rib, right side, and thus it was impossible to doubt that the organic source of the murmur was there situated.

The region of the heart afforded no abnormal dulness; the rhythm of the heart appeared natural; but the loud whirring *bruit*, above described, was transmitted over the entire præcordial region, and rendered an accurate exploration of the heart's action difficult.

In the upper and anterior portion of the right lung the respiratory murmur was absolutely inaudible, and from the right nipple to the lower margin of the chest in front it was likewise exceedingly obscure, although in that region the sound on percussion was natural.

Although the puffy and swollen condition of the soft parts rendered it a difficult matter to explore the deeper veins of the neck by the finger, yet by exerting a moderate amount of pressure over the course of the right subclavian and internal jugular veins, at a short distance above the clavicle, *the "purring tremor" was plainly recognized;* over the corresponding vessels at the *left* side of the neck this peculiar physical sign was absent.

April 23rd.—The breathing appeared somewhat relieved by venesection to six ounces, practised the preceding day; the face was rather less congested; but there was continued orthopnœa.

26th.—She had been repeatedly leeched upon the upper part of the chest, since the date of the previous report, and each time with decided relief to her breathing; however, the stomach now, for the first time, became irritable, rejecting all kinds of aliment.

29th.—Her manner had suddenly changed; she was less intelligent; her answers were slow and stupid; her stomach was still irritable; she had dozed a good deal during the night, and raved incessantly. Late in the day she was seized with general convulsions, from which she never rallied, and her death took place at nine o'clock in the evening.

*Post-mortem Examination twelve hours after death.*—*Head:* Scalp much congested and œdematous; veins of dura mater turgid; a considerable amount of serous effusion (but without any lymph) in the arachnoid sac. The veins of the cerebral hemispheres, especially in the neighbourhood of the superior longitudinal sinus, much congested. Large quantities of serum in the sub-arachnoid spaces and in the ventricles; the cerebral substance healthy, disclosing, however, when incised, a profusion of bloody dots.

*Chest and Neck.*—The sub-cutaneous areolar tissue of the neck, the chest, and the upper extremities, anasarcous; *the lower extremities perfectly free from the slightest œdema;* extreme congestion of the jugular and other veins of the neck, superficial as well as deep. The right internal jugular enlarged, so as almost to equal the small intestine in point of size, and distended with black blood. The left internal jugular, the subclavian, and the innominata veins, filled with black, firm, non-adherent coagula.

The lungs remarkably healthy.

*Heart.*—Absolutely healthy; all its chambers, its valves, and its muscular structure, perfectly normal.

*Aorta.*—Aorta enormously dilated; the entire arch of the aorta, and about two inches of the descending or thoracic aorta, were comprised in this dilatation, which formed a vast pouch of an oblong shape, presenting at the exterior all the appearance of a huge aneurismal tumour. This pouch filled up the mediastinum, and projected considerably, to the right of the sternum, into the right pleura, where it encroached extensively upon the root of the right lung, and upon the superior intercostal spaces. From the upper part of this pouch, the innominata, the left carotid, and the left subclavain arteries, arose; to the surface of this pouch the left vena innominata and the superior vena cava adhered. The left vena innominata, crossing from left to right, was so completely identified with the diseased aorta that all attempts to separate these vessels by dissection were fruitless. Along the line of contact the coats of these vessels were so perfectly amalgamated that they constituted conjointly but a single flimsy partition between the venous and the arterial blood. The right vena innominata and the descending cava were similarly united to the right side of the aortic pouch, and here a free communication had actually been established between the aorta and the vena cava, the intermediate partition having given way.

The left vena innominata and the superior cava *had undergone a considerable diminution in calibre at those parts of their course where they adhered to the aorta,* but lower down, where the cava receives the vena azygos, and debouches in the right auricle, it regained its ordinary dimensions.

On cutting into the aneurismal pouch, it was found to be formed by a true dilatation of the aorta, all the coats of that vessel being perfect, although greatly diseased and thickly studded with atheromatous deposits. A large, soft, black coagulum filled this enormous pouch: on slitting up the pouch the coagulum readily turned out, there were no *laminated* coagula whatever. The orifice of communication with the vena cava came readily into view on the removal of the coagulum. In size and shape it resembled the button-hole of a shirt; there was, however, a delicate frenum crossing it about the centre.

The diagnosis made in this case was " an aneurism of the aorta communicating with the superior cava." It was based upon the following considerations:—

1st. The congested condition of the entire tree (roots and trunk) of the superior vena cava, and the perfectly healthy condition of the corresponding tree of the inferior cava, showed that the organic source of the mischief was situated somewhere in the course of the trunk of the superior vena cava.

2nd. The extensive dulness on percussion in the upper part of the sternal region rendered it almost certain that there was a tumour of considerable size in the mediastinum.

3rd. The extraordinary heaving impulse communicated to the stethoscope, and even to the hand, all over the dull region, and the strength of this impulse, which was vastly greater than that afforded by the apex of the heart itself, appeared to show that this mediastinal tumour was aneurismal.

4th. The dulness over the superior costal cartilages and intercostal spaces of the right side of the chest in front, with the defective respiratory murmur in the upper part of the right lung anteriorly, rendered it probable that this aneurism had encroached upon the lung; the total absence of any symptoms of pulmonary irritation making against the supposition that there was any special disease either of the lung itself or of the pleura.

5th. The perfect freedom of the circulation in the carotids and the subclavians made it likely that the aorta itself, and not one of its three great branches, was the source of this aneurism.

6th. The peculiar whirring *bruit* at once suggested the idea of an abnormal communication between a vein and an artery. The site at which this *bruit* was most intensely audible, viz. at the costal cartilage of the second rib upon the right side, and its seemingly superficial source within the chest, forbade the notion of its originating in any valvular disease of the heart; and it certainly sounded very unlike any ordinary aneurismal *bruit,* or even any anemic *bruit.*

7th. The suddenness with which the distressing symptoms had set in, but above all the purring tremor observed to the right of the sternum anteriorly, and also *along the course of the great venous trunks in the neck*, afforded additional evidence, all but conclusive, of the nature of the disease.

Most observers have agreed in describing the *bruit* heard in cases of varicose aneurism as a *continuous* murmur. Now it deserves to be particularly mentioned that in this case the murmur was distinctly systolic, and systolic *only ; continuousness* can therefore no longer be considered an essential characteristic of the murmur accompanying varicose aneurisms.

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## SUMMARY.—SURGERY.

*Treatment of Aneurism by Injection with Perchloride of Iron.*—M. Malgaigne speaks in no very encouraging way of the use of the perchloride of iron as a means of curing aneurism. This mode of treatment was advanced by the late Pravaz, after he had proved the powerful effects of this preparation of iron in producing coagulation of the blood by numerous experiments on the lower animals, performed by himself and others at Alfort. On injecting fifteen drops of a concentrated solution of the perchloride of iron into the carotid of a horse, a firm coagulum immediately formed, and the vessel ultimately shrivelled up; high fever, however, followed, and on killing an animal so treated on the twenty-first day after the injection, pus was found in the artery. Pravaz found the artery quite obliterated in a sheep two months and a half after injecting a few drops of this liquid: he conceived that symptoms of intoxication followed its introduction into the blood. In April, 1853, M. Niepce laid before *Academie des Sciences* a case of popliteal aneurism, treated by this injection, in which pulsation ceased in the tumour, and its contents became solid in five minutes after the operation—considerable inflammation followed, but the tumour diminished, and on the twentieth day, being reduced to the size of a nut, the patient was considered cured. In May following, M. Lallemand communicated to the *Academie* a case which had occurred in the practice of M. Serres, of Alais. The aneurism was in the bend of the elbow; in this instance recovery likewise took place, but after violent inflammation and shoughing of part of the wall of the sac. M. Lallemand was of opinion that an unnecessarily large quantity of the perchloride had been injected. M. Serres, in recounting his experience of this method of treatment in the *Montpellier Medical Journal*, says that inflammation often supervenes so acute as not only to alarm the surgeon, but sometimes to endanger the limb or life of the patient. M. Malgaigne details the following case as having occurred under his own observation:—A mason, aged 25 years, was affected with aneurism at the bend of the elbow, the result of bleeding. Equal parts of perchloride of iron and water were cautiously injected, by means of Pravaz's syringe, to the amount of five drops; this producing no effect, five drops more were slowly thrown in—dreadful pain followed—pulsation ceased in the tumour—nor was the pulse to be felt at the wrist; the hand became cold and of violet colour; gangrene supervened, and amputation was resorted to, too late to save the patient's life. In this instance M. Malgaigne did not attribute the unsuccessful issue altogether to the mode of treatment, considering that gangrene and death occasionally followed even ligature; he conceived also that the precaution of making pressure on the artery above and below the aneurism should have been adopted, and possibly also that the dose had been too large. M. Velpeau, therefore, adopted the suggestion of M. Malgaigne, in the case of a student suffering from aneurism at the bend of the elbow, the result of bleeding, and before commencing to inject, caused the artery to be compressed above and below the tumour: eight drops were thrown in, but no effect was produced, and at a later period ten drops: pain followed, and it was ultimately found necessary to apply a ligature, after which the patient recovered. M. Lenoir, at the Hôpital Necker, tried the injection of perchloride of iron in a case of popliteal aneurism, at first without any effect; believing the solution to be badly prepared, he obtained some made with care, and injected six drops, and immediately after, as the first produced no coagulation, six drops more. For six days no pain nor alarming symptoms appeared: on the 23rd of June, in the evening, dull pain came on, soon followed by severe rigors, fever, profuse sweating, and on the 28th the patient died. Cases are also recorded—one by M. Soulé, of Bordeaux, the other by M. Alquie, of Montpellier, in both of which the inflammation ran very high, and ligature was ultimately resorted to. M. Malgaigne is of opinion that, on the whole, the injection of perchloride of iron is less hazardous in cases of varicose veins than aneurism: it has likewise been used in the treatment of erectile tumours, and is a powerful styptic in cases of hæmorrhage from cancerous ulceration. M. Malgaigne condemns this plan of treatment, and thinks no surgeon would be justified in subjecting his patient to a method now known to be so hazardous, a knowledge bought by sad experience.—*Revue Medico-Chirurgicale*, 1853.

*Prolapsus Ani treated by Strychnine.*—M. Duchaussay advocates the use of strychnine employed endermically near the region of the sphincter, as a means of curing prolapsus ani; and he is of opinion that Dupuytren's operation, by excision of radiating folds of skin around the anus, as well as that practised by Guersant, by means of the actual cautery, act merely by stimulating the sphincter muscle, and causing it to regain its contractility. With M. Guersant's permission, strychnine has been thus employed with success, in the case of a child, in the *Hopital des Enfants Malades.*

The prolapsus arose from obstinate constipation, had lasted four years, and protruded at times four inches. Considerable improvement had followed simple laxative treatment, but the gut continued to protrude an inch and a-half after each evacuation.

The child was cured in about a fortnight by the application of small quantities (one-sixth to one-third of a grain) of strychnine to a blistered surface in the neighbourhood of the sphincter.—*Archives Generales de Medecine,* Sept., 1853.

*Veratrine Ointment, as a local Application in Scrofulous Affections of the Joints.*—Dr. Klingner has employed, with success, an ointment, consisting of veratrine, gr. 5 to 10, dissolved in spirits of wine, and added to axunge ℥i. to promote absorption in scrofulous diseases of the joints. He considers its use inadmissible where heat, redness, or other signs of active disease exist; but when the affection has become chronic, he directs the bulk of a small bean of the ointment to be steadily and gently rubbed over the affected part, for a quarter of an hour daily. It produces a tingling sensation, with local increase of temperature, and promotes a restoration of the tissues to a state of health. In some instances, the itching which is caused proves distressing; he then omits the ointment, and uses friction of glycerine in its stead for a few days. The formication which attends the application of veratrine may extend over the entire body, and is often accompanied by an eruption resembling urticaria; there can be no doubt of its decided local stimulating powers, and that it is capable of materially aiding absorption in chronic disease. We ought also, possibly, to ascribe some part of the beneficial results in Dr. K.'s cases to the friction with which the ointment was applied.—See *Glasgow Medical Journal,* January, 1854.

*Use of Conium in Chronic Strumous Affections of Glands.*—M. Devay, of Lyons, has spent much time in investigating the therapeutical effects of conium, and finds that it is applied, with good effect, as a resolvent in cases of chronic enlargement of scrofulous glands. In cancerous affections its remarkable anodyne properties have been long known, but M. Devay conceives that it exercises a more powerful influence on such diseases than merely that of alleviating the suffering which attends them; he imagines that cures have occasionally resulted from its use in the atrophied forms of scirrhus. He strongly recommends its employment in simple glandular hypertrophy, as well as in strumous diseases of the joints and glands; and he considers that in such cases it is best used as an ointment, applied externally, and aided in its action by gentle friction.—*Gaz. Med. de Lyons.*

*Therapeutic Effects of Transfusion of Blood.*—Dr. Polli, of Milan, having tried the effects of transfusion in twenty-one cases, details sixteen in which it was successfully used with individuals almost in a dying state. According to this skilful practitioner, no danger is to be apprehended from the accidental mixture of air with the blood; on the contrary, the action of the air renders the blood of a brighter red colour, and the absorption of oxygen causes it to become more vivifying and easier of introduction. It is immaterial whether the blood be warm or cool; its vital properties, however, seem better preserved at a lowered than an elevated temperature. In transfusion of the blood, its fibrine may be previously removed without any danger of destroying its peculiar properties; and this possibility of injecting defibrinated blood makes the operation more readily performed.

The blood may be prepared for injection some hours before the operation, since it is a mistake to suppose that it loses its vital properties by exposure to the air or on cooling. The operation is performed with a simple syringe, the vein being opened nearly in the same manner as in bleeding. The blood may be drawn indifferently from any young and healthy subject. Dr. Polli sometimes made use of his own blood, sometimes that of his colleagues; three or four ounces at most. The blood, as soon as drawn, ought to be whipped with twigs, in order to remove the fibrine. This separation takes some minutes, never more than twelve, after which the blood should be filtered lest any fibrinous clots should prevent the transfusion. If any delay should then occur, before filling the syringe, the liquid should be shaken, so as to distribute equally through it the blood-globules, which have a tendency to sink by reason of their weight. Thus prepared, the blood is introduced into an ordinary pewter or brass syringe, having a fine nozle, slightly curved at the extremity, so as to be easily introduced into the vein. It is useless, and perhaps dangerous, to warm the blood or the syringe, which some persons wrap up in clothes wet in warm water.

The flow of blood being arrested by pressure made in the ordinary way, one of the largest and most superficial veins of the arm or instep is opened, and immediately the pressure being taken off, the nozle is introduced in the direction of the current of the blood.

The injection is accomplished by using gentle friction over the vein at the same time that the piston of the syringe is slowly pressed down, thus aiding the flow of the injected blood.

According to the author, repeated injections of small doses of blood in this manner are sometimes attended with the most happy results; and he strongly advocates such treatment, not only in those cases in which the patient is reduced to an anæmic state from repeated losses of blood or sudden hæmorrhage, but also in those diseases—as scurvy, chlorosis, &c., in which the disease is attended with alteration in blood itself.—*Journal Piedmonteaise.*

*Mode of Death from Chloroform.*—Mr. R. E. Bickersteth of Liverpool, after much careful investigation, comes to the following important conclusions on this subject:—

"1st. That in death from the inhalation of chloroform, the respiratory movements cease before the cardiac.

"2nd. That the heart continues its action, uninfluenced by the chloroform, for a period longer or shorter after the cessation of respiration, and that its then failing may be considered as a natural consequence of the respiration having ceased, and as independent of the influence of chloroform.

"3rd. That if, after the respiration has ceased, and while the heart is still in action, chloroform continues to be absorbed into the system, its movements may become impaired or cease—the chloroform in such case acting directly upon the heart.

"4th. That if artificial respiration be resorted to before the cardiac contractions are seriously affected, and be properly maintained for a sufficient period, the respiratory function may be re-established."

He adds the following highly practical obserservations:—

"I would here direct attention to the expediency of drawing forward the tongue, in all cases when it is found necessary to resort to artificial respiration. When the patient is lying on the back, so soon as the breathing ceases and the jaw drops, the tongue is particularly liable to fall backwards and close the orifice of the glottis. Artificial respiration, under such circumstances, is worse than useless. It is better at once to pull the tongue well out of the mouth, and passing a hook through the tip, confide it to the care of an assistant. I am convinced that in some cases in which artificial respiration has failed, it has been from the neglect or too tardy adoption of this very simple means. Time of the utmost value has been lost in the absurd attempt to restore animation, by applying stimulants to the nostrils, or pouring cordials into the mouth, without even a thought that the first can have little or no effect after the respiration has ceased, or that the second would as likely pass into the trachea and bronchi as into the stomach."—*Edin. Monthly Journal.*

*Treatment of Dislocation complicated with Fracture.*—1. M. Richet relates, in great detail, the case of a man, æt. 68, in whom a dislocation of the upper end of the humerus was complicated with fracture of the anatomical neck of the bone. Four days after the occurrence of the accident, he was placed under the influence of chloroform, and the reduction of the dislocation was easily effected by pressing backwards the head of the bone, without any traction being resorted to. The fracture was afterwards adjusted and consolidated; and when the patient was seen a year after, he had recovered the complete use of his limb.

M. Richet reviews the opinions of the classic writers, who agree in pronouncing the impossibility of reducing a dislocation of the humerus or femur, until after the fracture complicating it has become united. He shows the great power chloroform confers upon us in these cases, by the complete relaxation of the muscular resistance it produces, and the care with which the head of the bone may, by due manipulation, be forced back into its socket. He thinks the passive obstruction offered by the fibrous tissues of the parts has been exaggerated and ill-understood. In numerous autopsies he has made after recent dislocations, produced accidentally or experimentally, he has always found the aperture in the capsule broad and irregular, and in no condition to offer an obstacle to reduction. He does not deny that such obstacles may occasionally be offered by the fibrous structures, independently of the aperture of the capsule; but he maintains, from clinical and experimental observations that such obstacles are much more easily overcome by pressing the head backwards than by the usual practice of traction of the limb, which, indeed, only aggravates them. By the aid of chloroform, he believes a dislocation of the humerus into the axilla may thus always be reduced by pressing the head directly backwards. In several experiments that he has made, in which the head of the femur has been dislocated, and the bone then sawn through just below it, so as to simulate dislocation complicated by fracture, the reduction has also been easily effected by direct pressure.

2. In operating on these cases, M. Malgaigne recommends that chloroform should be used; that the fractured limb should be held by assistants; and that it should even be temporarily put up in apparatus before the reduction of the dislocation is attempted. Gentle motion of the joint should be practised at an early period.—*Revue Medico-Chirurgicale.*

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# THE
# Dublin Hospital Gazette.

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## CLINICAL LECTURES AT ST. VINCENT'S HOSPITAL.

### BY DR. O'FERRALL.

### *Abdominal Tumours, resonant on Percussion; Abdominal Subcutaneous Emphysema; its Characters; its Origin in Disease of the Rectum,—in Hernia,—in Ileo-cœcal Abscess.*

Those who know most about abdominal tumours, will most readily acknowledge the difficulties which in practice are occasioned by the extraordinary variety in their nature. The student who believes he has mastered the subject of *tumours resonant on percussion*, when he has become acquainted with all those varieties which reside within the abdominal cavity, will discover, when he is, perhaps, least prepared for it, that he has something yet to learn; for the abdominal parietes are liable to a form of swelling, smooth on the surface, resonant on percussion, and of considerable dimensions. And this is *abdominal subcutaneous* emphysema. It is rapid in its formation, and distressing in its effects; and the sufferer will be impatient if any hesitation as to its nature be displayed. I trust, therefore, that the short description which I shall now give you may be sufficient to enable you to recognize this remarkable lesion, when presented for your opinion.

It is, as I have said, rapid in its formation, and the practitioner may receive an early summons to see a tumour as large and as tense as a dropsy; and he may be told that at bed-time, the previous evening, no trace whatever of this condition had been observed. The tumour or swelling may, on inspection, be found to occupy the whole area of the abdominal parietes, as well vertically as in the transverse direction. It may be colourless, or, indeed, even remarkably pale. The skin is smooth, even shining and tense. On manipulation, this tension is found to differ materially from that arising from liquid effusion into the peritoneum, or that of an ovarian or other cyst. The integument is tense, but not resisting. The least and lightest pressure of the finger displaces it, but it instantly returns and leaves no pit or trace behind. There may, over the whole anterior middle portion of the abdomen, be no crepitation to mark its real nature, and, as yet, you may have only a suspicion, arising from the difference between the sensation then conveyed, and that with which experience had rendered you familiar, in cystic or other liquid accumulations. A light and springy percussion now elicits an unequivocal tympany, but short and faint, and, indeed, unlike any you ever heard before. Still it is tympany, however faintly marked. You now trace the swelling laterally towards either loin, and here a distinct crepitation is detected. It is similar, in all respects, to that which is met with over the neck and chest in cases where, from any cause, an abnormal communication is established between the air passages and the general areolar tissue. This crepitation may, perhaps, be detected also towards the inguinal regions, but is generally absent in the middle portion of the swelling. In the course of this examination, which is rapidly accomplished, you may now discover some blush in the integument, and further on a redness of greater or less intensity, and generally of a dusky hue. You are now approaching the real seat and source of the disease. The seat of this discoloration is different in different instances; but we shall suppose that on approaching the sacral or gluteal regions, you find the discoloration most remarkable, and that here the parts beneath the skin have that peculiar feel to which the term "boggy" has been applied. What history shall you be likely to receive, on inquiry into the case? If the patient has not had competent advice, and has not been made acquainted with the nature of his malady, you will be told that for a long time, perhaps years, there has been constipation, pain in defecation, occasional hæmorrhage, mucous or puriform discharges, and that he has suffered, as he believes, from aggravated piles. You proceed to examine the rectum, and you discover some one of the various forms of organic disease of that part, diminishing and obstructing its calibre, and producing that state, which an imperfect and superficial pathology has often described, under the name of stricture, as the essential disease. The emaciated condition of the patient is in accordance with the result of this investigation, and you have now a solution of the problem. There has been, in fact, perforation of the coats of the bowel. The natural attempt to limit, by what has been called adhesive inflammation, the depôt thus formed, has failed; or some impulse or disturbance has broken through its lining of lymph, and the cellular tissue has become injected with the gaseous contents of the intestine. If the case has been in competent hands, you will be made acquainted with the fact, that disease of the rectum has been recognized, although the present accident may not have been anticipated.

That which I have now described is one source of *emphysematous* tumour of the abdomen. The case lately in Mary's Ward is still in your recollection, and you will remember the rapidity with which, in that case, the abdominal swelling was produced.

But suppose the gluteal and sacral regions afford no marks of local disease, you may, perhaps, discover indications of mischief, as the fingers approach either groin, and here, or just below Poupart's ligament, you may encounter, first, the crepitation; next, the "boggy" feel; and then you may perceive the dusky discoloration before alluded to. The history belonging to such cases as this will differ materially from that which I have related, as connected with the former example. You may be told that an elastic swelling of long standing, and which occasionally disappeared altogether, has latterly become permanent and firmer in consistence than before. That vomiting, and constipation, and pain, have suddenly appeared, and existed for a few days, and that, with or without medical aid, the bowels have become free, and the vomiting has ceased, while the swelling continued to enlarge and to acquire a red and congested hue. Now, what is this case? It is most probably a knuckle of intestine adherent to the mouth of a hernial sac, and having a perforation, or sloughy opening, through which feculent matter has escaped into the sac, and failing to be bounded by plastic inflammation, or from sloughing of the whole sac itself, has been injected with its fetid gases into the cellular tissue. An illustration of this form occurred in Joseph's Ward, about two years ago, and created a considerable degree of interest at the time.

Having traced the lesion to the neighbourhood of the groin, you are not to conclude hastily that a hernial tumour is its source; and if the *right* inguinal region be the locality, there is more occasion for reserve on this point. The history may suggest another and very different organic change as the source of the emphysema. You may learn that a firm and painful swelling has been felt in the abdomen, at the lower part of its right side, and just inside of the hip-bone. That constipation, or great irregularity of bowels, had been complained of, and had been succeeded by sickness or vomiting, with chills or rigors, and a fever more or less strongly marked. That the integuments about the groin had become red and painful, and that extension of the limb occasioned considerable suffering. You may, in fine, have the history of *phlegmonous tumour in the right iliac fossa, or ileo-cœcal abscess.* On examination, you may detect, in addition to the boggy swelling, a gurgling which is transmitted, by pressure, upwards in the direction of the ascending colon. In this, as in the former cases, the lesion evidently consists in the escape of the gaseous contents of the intestine into the areolar tissue.

It is surprising how rapidly the cellular web becomes injected by this poisonous element. A few hours may suffice to develope a swelling extending all over the front of the abdomen.

The crepitation which is so characteristic of emphysema is, as I have said, not always to be detected in the most prominent portions of the swelling. This would appear to arise from the over-distention of the cellular plates, which very soon lose their vitality, and fall into a sloughy state. In one case I had an opportunity of inspecting the parts which had been destroyed by contact with the deleterious agent; and when incisions are made into such parts, the nature of the change is equally apparent.

The extent to which the abdominal parietes may be occupied by this peculiar swelling will not be the same in all cases, and will depend on its duration. If you are not consulted for twelve or eighteen hours after its commencement, the swelling may then have engaged the entire area of the abdominal surface, and have assumed the smooth, tense, hemispherical prominence alluded to. At an earlier period of its progress it will occupy a less extensive surface, and one half, perhaps, of the abdomen will exhibit this peculiar swollen condition. I have also seen it present a distinct swelling at each side of the external margins of the recti muscles, the connexion between those two portions being established by a transverse projection across the hypogastric region. In the case where the swelling occupies the whole anterior surface, the appearance of the abdomen might, to a hasty view, suggest the idea of a cavity tense with liquid effusion.

The practised observer will, however, even here, remark that the umbilicus is depressed and buried in the middle of the swelling, and he will contrast this appearance with that which is displayed in dropsy. In the one case the umbilicus is sunken and concealed, in the other case the umbilicus projects, and may be even distended by the liquid within.

It is, notwithstanding, by the careful exercise of the finger, that the diagnosis is to be established. It is to the diagnosis alone that I now wish to direct your attention. The treatment, as well as a history of its results, will form the subject of another inquiry.

Abdominal cutaneous emphysema is, no doubt, a rare accident in those diseases, in the course of which it is liable to occur. Malignant disease of the rectum may pass through all its stages without perforation of the intestine; and when perforation takes place, it is, in the majority of instances, limited by plastic deposit, and thus the fetid abscess is conducted to the surface by routes which vary in different cases. The contents of the sloughing hernia may reach the surface in a similar way, and an artificial anus be the result. The ileo-cœcal abscess may, in like manner, be uncomplicated with this lesion. The resonance and the gurgling which I have, on a former occasion, described as characteristic of some forms of this abscess, are entirely different from the diffused and huge emphysematous swelling to which I now refer.

But rare as it undoubtedly is, it has been frequently witnessed in this hospital, and you should be prepared to recognize it when suddenly presented to your notice.

Emphysema has been described with great accuracy by Hunter, Bell, and others; but the emphysema of authors is that produced by escape into the cellular tissue of atmospheric air modified by the products of respiration. As hitherto observed, it is generally confined to the parietes of the chest and the neighbouring regions of the neck, although its extension to other parts of the body is verified by the records of surgery. The emphysema, however, which originates in inflation from the intestinal canal, and most generally occupies the abdominal regions alone, and in this place gives rise to a swelling likely to be confounded with disease of the abdominal cavity, is now, I believe, for the first time, described.

# RICHMOND SURGICAL HOSPITAL.

## *Cases of Diseases of the Rectum;*

WITH REMARKS.

BY CHRISTOPHER FLEMING, M.D., M.R.I.A.,

SURGEON TO THE HOSPITAL.

The two following cases of "Disease of the Rectum," recently under observation, appear deserving of special notice:—

CASE I.—*Polypus of the Rectum accompanied with Prolapsus Ani and Hæmorrhage; Excision of Polypus; Cure.*—Thomas Doyle, aged four years, for ten months previous to application was observed to pass blood at stool. The discharges, which were described as being healthy, were always more or less stained with it, and often, blood alone was passed. There was tenesmus, and latterly a protrusion at the anus, which the mother was repeatedly obliged to replace. The general health of the boy was good, there was no diarrhœa, and with the exception of a slight anæmic look, his constitution appeared excellent; the protrusion was the ordinary prolapsus ani, the surface of which was irregularly spotted with bright arterial blood, obviously not exuding from it, and a tumour was discovered on its anterior aspect, of the size, colour, and consistency of a small mulberry, which bled from the surface, and was attached by a long, narrow root, traceable within the calibre of the bowel. Both the prolapsed intestine and tumour were easily returned; some mild aperient medicine and restricted diet were directed, and, after a few days, the child being brought to hospital, the polypus was removed by snipping it off beyond the point of application of a ligature around its pedicle. There was some slight bleeding from the anus for twenty-four or thirty six hours, and some pain whilst at stool. Within a week the child returned to the country, the hæmorrhage and prolapsus having disappeared.

On examining the polypus, it presented the structure of rudimental fibro-cellular tissue, its meshes being infiltrated with lymph and serum. Under the microscope the ordinary characters of such were discernible.

CASE II.—*Prolapsus of the Rectum of considerable Magnitude; Treatment with Nitric Acid; Cure.*—Peter Brennan, aged 24 years, of an unhealthy, strumous aspect, was admitted into hospital in March, 1853, labouring under an enormous protrusion of the anus and rectum, which rendered his life miserable. His countenance was pallid, his frame attenuated, and the smell from his person most offensive, his clothes being saturated with the profuse discharge from the anus, which escaped involuntarily, even when there was no protrusion. From childhood he was delicate, having had repeated diarrhœal and dysenteric attacks, to the last of which he attributed the date of his present disease, when about twelve years of age. At this period, and up to that of fifteen, he was apprentice to a tobacco manufacturer, subsequent to which his occupation was uncertain, but always laborious, being latterly that of a hodman to a bricklayer. During all this period his habits have been most irregular, his sufferings from hardship and from his disease extreme, and his diet uncertain and innutritious. At the age of fifteen he contracted syphilis, and underwent protracted mercurial treatment. For his present disease he has been in hospital, but left without any appreciable benefit. He cannot remain for any time in the erect posture without the escape of the protrusion at the anus. He has constant and urgent desire to go to stool, and passes large quantities of fetid discharge, tinged with blood. The escape of feculent matter is most irregular, both as to amount and consistence, and is always accompanied with a sensation as if the whole contents of the abdomen were escaping, and with protrusion at the anus of a considerable tumour, which he is obliged to replace or subject himself to extreme agony. There is a persistent, dull pain and uneasiness in the region of the rectum and pelvis, and his sufferings are less acute when the feculent discharges are solid than otherwise. He has little or no appetite, often nausea and vomiting, and is much tormented with flatulence; in fact, all the symptoms of aggravated dyspepsia are present. Under no circumstances has he irritability of the bladder. In the absence of any protrusion, the anus is patulous, and its circumference, covered with muco-sanguineous discharge, presents numerous ulcerated chinks in the direction of its rugæ. It is so wide, and the sphincter so relaxed, that a gaping, funnel-shaped cavity is exposed, within which the fingers, placed conically, passed with ease. It and the greater portion of the rectum protruded on the slightest exertion, and constituted a tumour of considerable size, as delineated in the accompanying woodcut, and presenting somewhat the appearance of a prolapsed uterus. The circumference, at its base, exceeded, by measurement, nine inches, and a line drawn from the base to the free end, where the orifice of the bowel existed, reached beyond four. The mucous membrane hung in loose, pendulous, and concentric folds, coated over with the ordinary tenacious and slimy secretion seen in such cases, and its submucous tissue was thickened with copious infiltration. Its surface, when first exposed, was of a bright red, which, in proportion to the duration of the prolapsus, assumed a dark congested modena colour; it presented irregular patches of ecchymoses, of adherent lymph, and of extensive ulceration. It was by no means sensitive to pressure; on introducing the two fore-fingers within the intestinal orifice, grasping the protruded intestine between them and the thumb, and measuring the intervening depth from the anus, there was so much of thickness as to give the sensation of the complete prolapse of the bowel. It was curious to remark how he restored this vast protrusion, and sometimes he did so by muscular efforts alone, without the slightest manual help. He bent forward, pressed his hands on his knees, when a gradual diminution took place in the bulk of the protruded bowel, and with a sudden gulp it disappeared, all being apparently effected by a combined and violent muscular effort. Again he failed in this, and was obliged to assist it with his hands. It is unnecessary to specify the details of treatment during the months of March and April, further than to state, that the horizontal position was enjoined, diet properly regulated, the regular action of the bowels ensured, and all the ordinary local means adopted to restore the healthy condition of the protruded bowel. On the 16th of April, although much dissatisfied, he acknowledged some improvement as to the amount of protrusion, and as to the discharge from the bowel, and the latter was obvious from the altered state of his linen, which was considerably less stained. The ulcers around the anus had a much more healthy appearance, and the rectal mucous surface was less loose and pendulous, much less congested, and the excoriated and ulcerated patches healed; yet the protrusion was considerable; any operative measures appeared to me quite unsuited to his case, as well from the nature of his constitution as from the large extent of surfaces which should be necessarily implicated in them. It occurred to me that the object sought by such could be accomplished by another expedient, and with that view I formed four equidistant radiated tracts, with concentrated nitric acid, commencing them near the intestinal opening, at the apex of the protrusion, and passing them as near as I could calculate to the upper margin of the inner sphincter. The breadth of those tracts was about a quarter of an inch, and the length two inches or so. They were well smeared with oil, and the bowel carefully returned: no pain was complained of during or subsequent to the application of the acid, which could be justly attributable to it: it was similar to that always complained of; it was relievable by the same expedients; it was not more severe during the act of defecation. There was no vesical, no abdominal irritation. From day to day there was noticed a diminution in the amount and in the frequency of the protrusion, and the irritability and uneasiness about the rectum and verge of the anus were less.

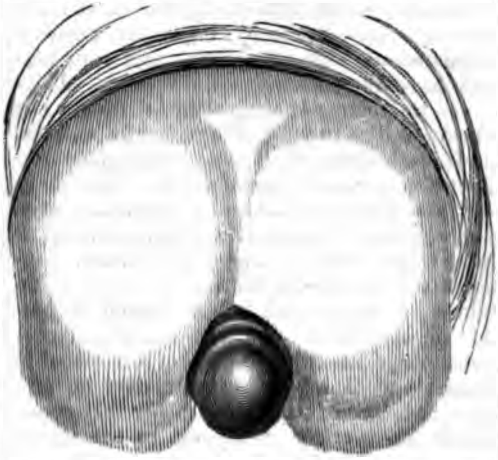
20th April.—Fourth day from the application of the acid: report most favourable as to the progress of the case and the sensations of patient: all prominent symptoms improved. I made a careful examination of the rectum, and found in the nitric acid tracts many deep, ulcerated sulci, with defined edges; the lateral ulcerations were much more marked than the anterior or the posterior; there was no tenderness of any amount worth noting, and there was decidedly less of laxity of the mucous membrane. The ulcers at the edge of the anus were more healthy: I touched them over with sulphate of copper.

25th April.—Progress good; discharge from the rectum and anus much less; local uneasiness comparatively slight; general health greatly improved, and feeling of great comfort and relief experienced in consequence of the absence of tenesmus and frequent prolapse, as heretofore. Feculent discharges once daily, and without pain, and subsequent easy returns of bowel.

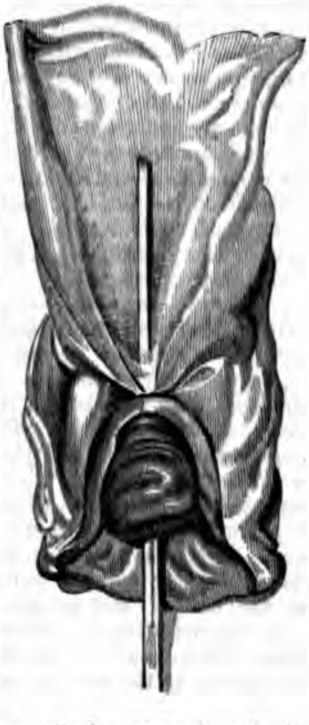
28th April.—Improvement, in every particular, progressive; obvious diminution in bulk and shape of protrusion, and mucous membrane much more tensely spread over it; ulcerated patches visible, but more limited and superficial; proportionate decrease in discharge; two ounces of an astringent lotion to be thrown into the rectum morning and evening.

3rd May.—Fifteenth day from first application of nitric acid; report most satisfactory; protrusion of bowel less frequent, occurring only once in twenty-four hours; mucous discharge also much diminished; defecation natural and without pain; can cough, sneeze, and use any exertion without any protrusion, also walks about without annoyance; outlines of previous ulcerated patches merely visible, and intervening portions of mucous membrane much more fixed, but yet loose and flabby. Pencilled those spaces with nitric acid, as in the first instance, but less extensively; effect apparently now more productive of pain, yet not very acute, and easily controlled by hip-bath and anodyne enema. Complete subsidence of all uneasiness after a few days; subsequent steady and progressive improvement in tone and in functions of bowel, so much so that on the 14th May the patient was very much improved: the bowel has not now descended for many days; its contents are discharged regularly once in the twenty-four hours, and without pain, and without any appreciable amount of prolapsus, and the discharge from the anus is much less. Further more minute details of progress or of treatment would be here inappropriate. The case was witnessed whilst in hospital, at its different stages, by a very intelligent and observant class of pupils. The man left of his own accord on the 4th of June, having then had full control over the prolapsus, and the most healthy action of the bowel being established. He moved about without any inconvenience—was recommended to go to the sea-side, to bathe, and to attend to the state of his bowels. In August he called on me, on his way with his fellow-workmen to see the Industrial Exhibition, and expressed himself as being perfectly free from the prolapsus, or any other annoyance. I then examined the rectum, with Dr. M'Kenzie, of Edinburgh, who happened to be in my study at the time, and heard his report of his condition. The anus was loosely contracted, yet not patulous, and the ulcerations around appeared to have perfectly healed. There is every reason to assume that the cure has been permanent.

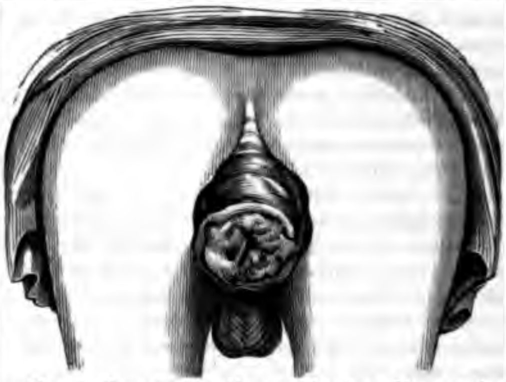
*Remarks.*—From reflection on the above cases, there are deducible many important practical considerations, although neither case can, perhaps, be said to possess much of novelty. Polypus of the rectum is a rare form of disease: it is mentioned as such by all systematic authors, and it is admitted by all as occurring more frequently in the earlier periods of life; but I have not found that prolapsus ani is mentioned even as an occasional attendant symptom, neither is hæmorrhage stated as being so, and when we consider the frequent occurrence of prolapsus ani in children, it may be well to bear in mind its possible dependence on the presence of polypus. Hæmorrhage, also, in that distinct form noted in the first case, is a very rare attendant on prolapsus; should it occur, it is rather that muco-sanguineous variety mentioned in the second case. Attention to those particulars will assist in the differential diagnosis, and that the surgeon must be circumspect is proved by the mistakes which are recorded. The very exaggerated form of prolapsus in the second case is of rare occurrence in adult man, in the absence of injury or of disease, causing an inefficient, if not complete suspension of the action of the sphincters. Doubtless, very large protrusions of the anus and of the rectum do occur, singly or conjointly, arising from causes not now under consideration. The operative proceedings suggested by different authors may be suitable to special examples of those cases, but they are in very few cases, indeed, that I am aware of, persistently beneficial, and in all they are more or less hazardous. Those operations have for their object, mainly, the more perfect and the more complete closing of the sphincter, either by its shortened and divided fibres, or by the consolidation of such with the anal orifice, tegumentary or mucous. I am of opinion, however, that the result of the above case may lead to the hope that a milder mode of proceeding may be adopted, and that the agglutination of the mucous wall of the rectum to its muscular, by the establishment of healthy inflammatory action, can be effected in the manner I have detailed, so as to enable the special muscles about the lower aperture of the rectum to perform the natural and requisite offices. Moreover, the cicatrization of the several ulcerated chinks, the necessary result of the procedure, will tighten up the mucous membrane, so as to render permanent such union. In the particular locality I have marked, away from the external orifice, the mucous membrane appears to be here as little sensitive as the tracheal mucous membrane is, distant from the larynx, and hence the comparative freedom from pain in the application of the remedy. The woodcuts are accurate representations of the appearances delineated in the drawings now in the museum of the Richmond Hospital.



No. 1, being an ordinary "Prolapsus ani" in a child.



No. 2, a "Prolapsus or invagination of the rectum in a child, as contradistinguished from a prolapsus ani."



No. 3, the combination of the two diseases in the adult, as existing in the second case I have detailed. A careful investigation of each cut will at once assist in establishing the diagnosis between each.

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## WHITWORTH AND HARDWICKE HOSPITALS.

### *Cases of Discharge of Ligamentous Substance from Intestines; Application of Microscope to Diagnosis; with Clinical Observations.*

BY DOCTOR CORRIGAN,

PHYSICIAN IN ORDINARY TO THE QUEEN IN IRELAND.

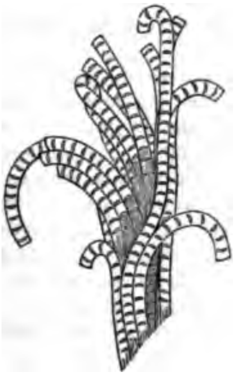
*Reported by* MR. F. QUINLAN.

CASE I.—Bridget Geary, a cook, aged 30 years, one year ill, admitted into the Whitworth Hospital, December 6, 1853, complaining of headach, particularly towards the vertex, and of sick stomach on awaking in the morning, which feeling is relieved by taking food, but frequently recurs in the course of the day; her bowels are rather constipated; her appetite, which is bad in the morning, becomes better as the day advances; she is constantly thirsty, and a few hours after meals her stomach becomes greatly distended. A moveable tumour is perceptible, deeply seated in the right lumbar region; she complains of a gnawing pain about the heart; the sounds of the organ are, however, healthy. Pulse 68.

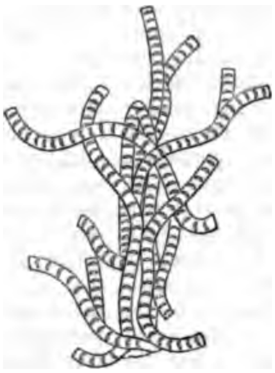
She states that about twelve months ago she experienced a sense of uneasiness in the abdomen, accompanied by headach, and about four months since she began to pass small pieces, as she supposed, of tape-worm. She took kousso, turpentine, and other remedies, without experiencing much benefit, previously to her entering the hospital.

*Observations.*—Bridget Geary came into hospital to be cured, as she said, of tape-worm, which began to be passed, as above stated, about four months since. Her statement is, that pieces are passed in considerable numbers for two or three days, and then, perhaps, none at all for many days afterwards. She had taken kousso, turpentine, &c., to destroy the tape-worm, without effect; she was desired to preserve the first

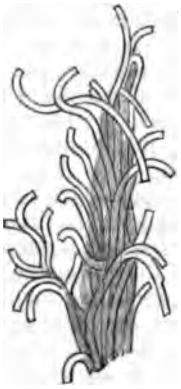
s of the worm that appeared, and no me-
e, with the exception of a simple purga-
was given.
ı the 17th of December she showed us some
s of tape-worm, as she supposed it; these
s consisted generally of oblong or irre-
ly-shaped pulpy membranous-looking sub-
es, of about half an inch long and of about
ame breadth, or narrower, of a brownish co-
resembling small portions of soft macerated
er, and at first sight, did bear a resemblance,
careless observation, to joints of tape-worm;
m holding them up to the light, there were
ier the orifices of oviducts visible at the
s, as in the tænia solium, nor ovaries, as in
othriocephalus latus, and the shapes were
too irregular for the joints of tape-worm;
ı they were stretched by pulling in one di-
on, they were elastic; when pulled cross-
, even gently, they tore into fibres. That
were not joints of tænia was evident to the
d eye. The next point to be determined
what they were, and whether the patient might be a malingerer. I gave the substances to Dr. Frazer, who kindly undertook to examine them by the microscope, who at once discovered that the substance was yellow elastic ligament. Dr. Lyons also made an examination from other specimens, with the same result. Queckett has lately discovered that yellow elastic ligament, such as we find in the middle tunic of the larger arteries, and the ligamentum nuchæ reveal a peculiar characteristic, a high microscopic power showing it to consist of bundles of fibres, more or less branched, having waved or curled extremities, and with very distinct transverse striæ marking each fibre. Under one of the microscopes before us, a portion of the substance passed from the intestine is placed, and under another, a portion of ligamentum nuchæ from the neck of the sheep; the identity of the substances is at once shown. The power used with the two specimens from which the woodcuts, Nos. 1 and 2, are taken, is 600 linear. No. 3 is a drawing of the substance expelled from the bowels, taken with a power of 350 linear.



No. 1.
A Drawing of a portion of Ligamentum Nuchæ, magnified 600 diameters.



No. 2.
A Drawing of a portion of the Substance passed from the Intestines, magnified 600 diameters.



No. 3.
A Drawing of the same Substance, magnified 350 diameters.

have introduced this, which, although not
'ing so fully the structure as the higher power,
rtheless shows it of quite sufficient distinct-
to enable you to recognize it with a micro-
ꝫ of moderate power. Arterial tunic, as
dy observed, would exhibit the same struc-
; but the pieces obtained in our first exami-
n were of such a shape, as to show that it
not probable they had been pieces of artery.
microscope was here of great assistance to us;
or it we might have supposed that the sub-
es passed were masses of lymph from a dis-
l cœcum or colon; or we might have accused
atient of malingering. The microscopic exa-
tion also led to a favourable diagnosis of the
ur; it was again examined; it was free
tenderness; it could be moved about, and
s felt of an oval shape, about two inches in
th, and about as thick as an ounce phial, and probably consisted of an accumulation of substances similar to those passed; it could be pressed back into the abdomen, and it lay about half way between the spine of the ilium and the umbilicus. The microscopic examination also showed us that the patient was not malingering, for the substances passed had lost all external resemblance to ligamentum nuchæ, and could not have presented the peculiar pulpy, brownish appearance, had they been recently obtained for purposes of deception. This case will be worth recollecting, especially by students who might, in after life, have to pronounce upon cases of supposed malingering in the army, for a man presenting such substances as pieces of tape-worm might be unjustly accused of having designedly attempted an imposition. I need scarcely tell you that this substance, ligamentous tissue, whether in the form of ligamentum nuchæ in

the neck of mutton or beef, or of arterial tissue, in which form it enters largely into the bulk of sweetbread, is perfectly indigestible.

Two or three mild purgatives of castor oil and turpentine were administered at intervals of one or two days, and as the evacuations were watched numerous pieces similar to those already described were obtained, mixed with short tubular pieces, evidently portions of arteries preserving their circular form, but pulpy, brownish, and easily torn, and mixed with them were several small pieces of potato-skin. On the 27th December, the tumour had quite disappeared; some bismuth powders were ordered to allay trifling irritation of the stomach and intestinal canal, and in a few days afterwards she left the hospital.

The precise portion of the intestinal canal in which these substances collected it is not easy to determine, nor is it of practical consequence; it was probably in a cell of the ascending colon, or perhaps one of those diverticula in the ilium, which are occasionally met with, and which would form a ready receptacle for indigestible substances. Considering how frequently portions of ligamentum nuchæ and arterial tunic must be swallowed, it is only surprising they are not much oftener found under circumstances like the present; yet I am not aware of any instance in which this substance has been hitherto noticed as forming the basis of an intestinal concretion. The tendency which indigestible substances have to aggregate in the intestinal canal is very singular; it is well exemplified in the hair balls found in the stomachs of cows, and it is seen in the case before us, for the quantity of ligamentous tissue from time to time discharged in the present case must have been the accumulation of portions swallowed from time to time, and yet, like the hair balls in cows' stomachs, the portions, through the attraction of similarity, appear to have adhered together.

The next case would have escaped my observation but for the attention of Mr. Sargint, my resident clinical clerk.

### *Reported by* Mr. Sargint.

Case II.—Thomas Lowry, aged six years, was admitted into the Hardwicke Fever Hospital on the 25th November, 1853, with a slight febrile attack, from which he was soon convalescent. He was discharged on the 8th December. He was then exposed to cold and hardship, and returned to hospital on the 16th of December, 1853, with pneumonia of the left lung, and symptoms of intestinal irritation; his skin was dry and desquamating; there was tenderness on pressure over the cœcum; tongue pointed and red. His mother stated that a year previously his father had died, and that she had been obliged to turn mendicant, in order to support her children, and that their food has consisted of all kinds of scraps, viz., bread, meat, bones, or anything else she could pick up; she also stated that he frequently complained of something moving about in his stomach.

He rapidly recovered from the pneumonia, but continued in a low state, without appetite, with a circumscribed flush on both cheeks; tongue pointed, with a broad red glazed band down the centre; tip red, with numerous red prominent papillæ, and a number of white aphthous spots at each side of the glazed central band. The evacuations were rather slimy, with hard feculent matter intermixed; and on December 30th, when examined more closely, there was noticed at the bottem of the vessel a whitish substance, like bleached shreds of excessively boiled beef, of a very pale yellow colour, which could easily be separated in its length into fibres; the whole was about an inch and a half long. The next day, a smaller piece, exactly similar, was passed. On examining these substances with a magnifying power of 250 linear, they were found to consist of striated fibrous tissue, in every respect identical under the microscope with those found in Geary's case.

He was discharged cured on the 20th January, 1854.

The appearance under the microscope was precisely similar to that already described, but it was obvious that the portions, of which a quantity sufficient to fill nearly an ounce phial was obtained, had lain a much shorter time in the intestine than in Geary's case, for they presented much of the natural appearance and colour of ligamentum nuchæ; the pieces were, too, of considerable thickness, and on some of them, with the naked eye, there were plainly perceptible the squareness of end produced by their being cut across with a knife.

The resemblance of the case of the child to remittent infantile, or worm fever, as it is popularly called, is well worth noticing, and should lead us in such cases to a very careful examination of the abdomen, and of the evacuations in children suffering under such symptoms, to discover if the disease may be kept up by lodgment of some indigestible substance.

Children, like chlorotic females, have occasionally very odd propensities. I remember seeing a child that for some considerable time had suffered under colicky pains, loss of appetite, symptoms of gastric and intestinal irritation, and considerable emaciation; at length the abdomen became so lank, and the integuments so thin, that I could discover a tumour that was very irregular in shape, and that resembled very much a knot of hardened scrofulous glands, of about the size of a small wallnut; but this tumour could be easily moved about, and from day to day it changed its position. At length I was able to satisfy myself that it was moving along the colon, and I felt assured that it was an intestinal concretion of some kind or other; and I learned that the child had a habit, of which it was almost impossible to break her, of eating gravel from the garden-walk. I ordered a very mild opiate to be given whenever colicky pain came on. I do not think it a good practice in such a case, or when any foreign indigestible substance, as a piece of coin, a button, or a broken bit of some toy, is swallowed, to give active purgatives; the foreign substance will pass more safely if permitted to pass slowly with food of such a kind as will furnish bulk in the intestines. In this case the foreign substance was at length passed, and was found to consist of several small stones of limestone gravel, agglutinated by mucus.

I may, in conclusion, mention another case in which distressing symptoms arose from the presence of a piece of limestone gravel. The child, of three years of age, had the propensity of putting gravel into her nose and mouth; she had been for weeks suffering from purulent discharge from one nostril, and the mucous membrane became so thickened that the nasal opening of that side was much smaller than on the other side. Mr. Cusack examined the case with me, and felt high up in the nostril a hard substance; a curved probe was introduced, and hooked round it, and a piece of limestone gravel, nearly as big as a pea, was extracted; after which all the previous irritation and discharge subsided.

NOTE.—The results of the examinations of the ligamentous substances discharged from the bowels, in these cases, would appear to throw light on the true nature of a case reported by Dr. A. Farre, in the *Microscopical Journal*, vol. ii. p. 189, that of a woman who passed substances resembling shreds of false membrane, which he states consisted entirely of confervoid filaments, probably oscillatoria. There is a remarkable similarity in the description of the appearance of the substances passed in the case related by Dr. A. Farre, and in the case of Geary. Dr. Farre describes the substance passed as presenting "the appearance of shreds of false membrane," of a buff colour, "and of a peculiar elasticity."

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## Rupture of the Membrana Tympani, the Effect of Accident.

BY WILLIAM HEALY, M.B., F.R.C.S.I.,

SURGEON TO THE EYE INFIRMARY, CUFFE-STREET.

A young man of very healthy appearance and sound constitution, aged 22, applied to the Eye Infirmary, Cuffe-street, on the 10th of Jan., and informed us, that five days previous, while amusing himself "snow-balling," one of the balls hit him with great force on the mastoid process of the left temporal bone. He, at once, was sensible that he lost the hearing of that ear, and complained of a noise, as if something was rushing through this organ to his head, he could find no relief from this unpleasant sensation, even in the reclining posture. To use his own words, "there was a constant buzzing, rushing noise, nearly amounting to torture." On examination with the speculum I found upon the glistening surface of the membrana tympani a small black spot, which looked like a contracted, irregular pupil; the appearance at once struck me as that arising from a rupture of this membrane, which opinion was fully confirmed by my colleague, Dr. Tyler; however, to make myself quite sure, I applied a looking-glass to the external meatus, and asked the patient to shut his mouth, hold his nostrils, and attempt to expire forcibly; he did so, and a small stain of vapour was clearly perceptible upon the looking-glass. I then injected, very gently, some warm water into the ear, which immediately passed down into the mouth, through the Eustachian tube; upon applying the stethoscope to the ear a very peculiar noise was heard, exactly like a chirrup of a young bird—a sharp twitter. He suffered very little pain, but was subject to perpetual annoyance, from the "rushing noise" alluded to. I desired him to remain perfectly quiet, neither to blow his nose, cough, or speak loud, in order to try and procure adhesion by the perfect rest of the injured part, and directed him to apply warm poultices to the ear. The day after, Mr. Colles did me the favour to examine his ear, and corroborated our view of the case fully. The warm poultices gave great relief: about a fortnight after, a slight discharge set in, not accompanied with any pain. The removal of the poultices occasioned a great increase in the "buzzing sound." He was then ordered to keep a piece of wool constantly in the external meatus. Three weeks after the occurrence, no attempt at union taking place, I introduced Dr. Toynbee's artificial membrana tympani, as manufactured by Weiss, composed of gutta-percha, which, with some slight manipulations, appeared to fit remarkably well. I moistened the gutta-percha in warm water previous to applying it, and ordered the patient, while it was being introduced, to stop his nostrils and take a full inspiration; he did so, which assisted the adjustment of the artificial membrane, close up to the tympanum, and immediately the "rushing noise" ceased. Previous to applying the instrument, by the advice of Dr. Tyler, I took the measured distance that the tick of the watch could be heard, which amounted to eight inches from the external meatus; after applying the instrument, it could be heard at the distance of fifteen inches.

January 26th.—Removed the artificial membrana tympani this day, on account of the return of the ottorrhœa and a sensation of throbbing. Renewed the poultices.

January 28th.—Throbbing gone; hearing distance, without artificial membrane, twelve inches. Ordered cathartic mixture and poultices.

January 30th.—All unpleasant symptoms having subsided, I introduced the artificial membrane, when the hearing distance was at once increased from twelve to twenty-nine inches.

February 4th.—No unpleasant symptoms recurring, and finding the greatest advantage from the use of the artificial membrane, he wears it the whole day with comfort, and at night removes it (in order not to injure it), and fills the external meatus with wool.

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## CHLOROFORM IN INSANITY.

BY HENRY THOMPSON, M.D.

TO THE EDITOR OF THE DUBLIN HOSPITAL GAZETTE.

Sir,—I wish to add to the information already acquired on the subject of the internal administration of chloroform, as a narcotic and tranquillizer of the nervous system, that it has been used with marked advantage in the Omagh District Lunatic Asylum, in cases of insanity complicated with sleeplessness, or rather noisy wakefulness, at night. In such cases we have been in the habit of giving it in dram doses, repeated if requisite, and it has proved so much more efficacious than any of the other narcotics, that it has almost entirely superseded them. No unpleasant effects of any kind have been observed to follow its use. I was led to recommend it in these cases by experience of its value in delirium tremens, as suggested by Mr. Butcher some time ago, and I have now no hesitation in saying, that it is a perfectly safe and powerful remedy for conditions of the nervous system, such as I allude to.

Henry Thompson, M.D.,
Surgeon to the Tyrone Infirmary, and Visiting
Physician to the Omagh District
Lunatic Asylum.

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## Remarks on a Case of Comminuted Fracture of the Arm at its superior third; Union with Deformity; Amputation at the Shoulder.

BY THOMAS CROFTS SHINKWIN, M.R.C.S.,

LECTURER ON PRACTICAL ANATOMY, CORK SCHOOL OF MEDICINE; LATE HOUSE SURGEON, NORTH CHARITABLE INFIRMARY, CORK.

[Read before the Cork Medical Society].

Peter Wagstaff, aged 34, labourer, a native of Dunmanway, County Cork, of a thin, spare habit of body, countenance expressive of great pain and anxiety, applied for surgical relief, as an extern, at the South Infirmary, 1st July, 1851; was admitted same day, under Dr. Tanner.

*Present State.*—His right arm is completely paralysed, and very much atrophied; the palm of the hand reversed, and the entire limb apparently lengthened.

*History.*—States that about eight years ago, whilst engaged in taking down the wall of an old house, the building gave way, burying him beneath the ruins, from which he was extricated, with comminuted fracture of the upper part of his arm, and some slight bruises about his chest. He was placed under treatment, and union of the bone took place, but with great deformity of the limb. Two or three months after this, he began to experience almost intolerable pain in the shoulder joint and arm, which gradually became so violent, that on several occasions he thought of committing suicide. About that period, he again applied for medical relief; when the arm was re-fractured, and put up in splints; his medical adviser using every available means to restore the palm of the hand to its normal position, but without any success. Soon after the arm had been re-fractured, the limb began sensibly to waste away, became totally useless, and the pain returned with more violence than before. From the constant nervous irritation and anxiety of mind under which he laboured, a consultation was summoned, and it was agreed to amputate the arm at the shoulder joint; which operation was performed on the 6th, with a single flap, the one Sir Astley Cooper prefers. Not the slightest unpleasant symptom occurred after the operation; and the patient was dismissed free from pain, and putting up flesh, on the 30th.

There were three points connected with this case, to which I would wish to direct attention.

1st. What was the cause of the pain?

2nd. The unusual length of time the ligature which was placed on the axillary vessel took to come away.

3rd. That it is not so easy to command hæmorrhage in amputations of the shoulder, as is laid down in our class books.

First. *The pain, to what cause may we refer it?*—Miller, in his "Practice of Surgery," says, "that the shoulder, like all the other joints, is liable to become disorganized by disease, and that the head of the humerus is the part usually attacked."

So closely did the symptoms under which this patient suffered agree with those described by Miller, viz.: "wasting of the deltoid, great pain, constitutional disturbance, &c.," that, but for the total absence of any external signs of inflammatory action going on in the joint, we should have come to the conclusion that he laboured under a "structural and inflammatory disease." But, on examination of the head of the humerus, we could not discover the slightest alteration in the structure of the bone. Therefore, I think we may place this case under the heading Omalgia, and infer, that the pain was caused by some particles of the fractured bone setting up a certain amount of nervous irritation in the joint and arm; more especially so, as it is just about the part where the fracture occurred that we find the nerves of the arm grouped more closely together, thereby offering a greater surface of ervous tissue to be wounded, than if the fracure had occurred at any other portion of the umerus.

Preservative surgery, so much and so deservdly esteemed at the present day, would have een of no service in this case. Nor, as expeience tells us, would the operation of neurotomy ave given the patient any permanent relief. mputation at the shoulder joint, was the only vailable means to save the person from sinking nder the incessant nervous irritation and pain rom which he suffered.

Second. *The ligature.*—In ordinary cases, a ligaure placed on a vessel separates about the seventh r twelfth day; but, in this case, the ligature did ot come away until the twentieth after the peration, though encouraged to do so each orning, at dressing, by gentle traction and wisting. In fact, the incision was completely ealed, except where the ligature depended from he shoulder, before it separated.

Third. *It is not so easy to command hæmorrhage in mputation of the shoulder, as is laid down in our lass books.*—The subject of the utility or the on-utility of using compression on the sublavian artery, as it passes through the posterior nferior triangle of the neck and rests on the rst rib, in order to restrain hæmorrhage from he axillary vessel during the operation of exariculation of the shoulder joint, and in amputaations of the arm near that articulation, has ngaged the attention of the profession for a onsiderable period.

Some of our highest authorities conceived, hat if they could use sufficient pressure on the ubclavian vessel as it passes over the first rib, to control hæmorrhage when the axillary artery would be divided, the great danger of amputation at the shoulder joint would be very much diminished. To accomplish this, the older surgeons laid great stress on the absolute necessity of securing the vessel by ligature before proceeding to amputate. If we look back on the history of this operation, we find Le Dran placing a ligature on the vessel before he amputated; and, in describing his second incision in the operation, he speaks most forcibly of keeping the knife near the humerus, not to wound the artery too high up. When we come to more modern times, we notice La Faye, Sharp, Nanoni, Bertrandi, all using a ligature before they made their final incisions; but, even with this certain means of commanding the hæmorrhage, they evidently undertook this operation with fear.

Broomfield was the first who, as far as I can find out, used compression on the subclavian above the clavicle; but, even with this pressure, he used to apply two ligatures on the vessel (axillary), before making his final flap. After his time, there were various tourniquets invented, but one after the other they have been discarded, as not only perfectly useless, but considerably in the way of the operator. Dahl invented a tourniquet for making pressure below the clavicle, most probably suggested to him by the observations of Camper, who used to demonstrate to his class, on the dead subject, that by placing the "thumbs under the point of the coracoid process," it would be impossible to force injection through the axillary from the subclavian vessel.

It would be useless and uninteresting to follow the various modifications which surgeon after surgeon employed in trying to command hæmorrhage from the axillary artery during this operation. We will, at once, come to about the period of the battle of Waterloo, when we find Brodie evidently laying aside any confidence which he hitherto may have had in pressure on the subclavian, as he tells us that he did not cut the artery until making his last flap, and then he had nothing to do but attend to the hæmorrhage. Larrey also followed this plan, more especially, in the field.

We have it laid down as an axiom in the greater portion of our class books, not only on surgery, but also on anatomy, that to command hæmorrhage from the subclavian or axillary artery in amputations at the shoulder, we have *only* to compress the vessel from above the clavicle against the first rib; not making the pressure directly downwards, but downwards and backwards. Presumptuous as it must, and, no doubt, will appear, for me to think of differing from such high authorities as Sir Astley Cooper, Liston, Larrey, Guthrie, Harrison, Hargrave, &c.—one of whom says,* "that the patient does not lose a drop of blood, and ere *compression* is remitted the artery is tied;" and another of those authorities remarks,† that this fact "is now so well known to every tyro in the profession, that no argument or case is necessary to enforce it;" and he adds, "that the compression ought always be made above the clavicle, where nothing intervenes between the vessel and the means employed, but the skin, platysma myoides, and cervical fascia." Yet, with the greatest deference to all and each of these authorities, I cannot but think, that if we look at the position which the subclavian occupies, at the point where it passes over the first rib, we will see that it is not such an easy matter to compress it as one might at first imagine: for, if we look attentively at the space in which we are told to apply the pressure, we will see that it does not measure‡ "more than an inch and a half from before backwards, but somewhat less from above downwards;" and we must be also aware that, in many cases, this space is considerably lessened in size by the attachment of the trapezius to the clavicle, and, in some cases, the omo-hyoideus being attached to this bone would render pressure on the subclavian artery quite impossible. John Bell, at p. 369, vol. ii. of his "Anatomy," says, "the arch in which the artery lies (just at this point) is so deep, the muscles so strong, and the artery so little exposed," that to use pressure is utterly out of the question. And though, to contravene Bell's opinion, Professor Harrison brings forward the fact of certain persons being able, at will, to stop the beat of the pulse at their wrists, by forcibly carrying the arm downwards and backwards, and thus compressing the artery against the ribs, yet we know that this would not be the most favourable position for the arm to be placed in for amputation at the shoulder joint, as all authors (with the exception of one) agree, that the arm must be held horizontally during the performance of this operation, making the arch in which the artery is placed even deeper than in the usual state, by throwing up the clavicle. Harrison, in speaking on this subject, says, that when we place the arm at right angles to the body, "the artery is at a great depth from the integuments." Burns, in his "Surgical Anatomy of the Head and Neck," describing the operation of placing a ligature on the subclavian, where it rests on the first rib, says, "that he had to provide himself with instruments of various forms and curvatures, as the narrowness of the space between the clavicle and the first rib, and the unusual depth of the vessel, in consequence of the *elevation* of shoulder, rendered the use of the common aneurism needles quite impossible."

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* Larrey. † Hargrave. ‡ Ellis.

We must also remember that we have the deep layer of the cervical fascia "forming a dense lamina in front of the subclavian vessels;" and, furthermore, if we divide the sterno-mastoid muscle by a transverse incision, and trace the deep layer of this fascia downwards and outwards, we shall see that one layer of it becomes intimately attached to the upper border of the clavicle, presenting such a strong and unyielding surface between the sterno-mastoid and trapezii muscles, that, in experimenting on this subject some few days since, I was enabled to demonstrate to my class that it was completely out of my power to make the slightest impression on the injection with which the subclavian artery was filled. Professor Corbett, in his "Anatomy of the Arteries," says that we are also able to trace a process of fibrous membrane upwards behind the subclavian muscle, by which this membrane becomes continuous "with the deep portion of the cervical fascia placed in front of the *third* stage of the subclavian artery."

But were there no anatomical difficulties to be overcome, there is still another obstacle to using pressure on the subclavian artery above the clavicle. And what is this? Spasm of the muscles which surround this joint at the moment of operation. We have our patient, with his arm stretched out at a right angle with the body; we have our assistant trying to use compression in the way taught; we transfix the deltoid, and the moment we do so contractile spasm follows, the effect of which is to throw up the clavicle, deepen the arch, and make tense the fascia, thereby putting it completely out of the assistant's power to use compression on the vessel, at least with any effect.

This is exactly what occurred in the case before us, though the operator, with the ready tact which all surgeons should possess, placed his finger on the mouth of the bleeding vessel and instantaneously stopped it.

I make these few practical remarks with great diffidence. I should hope that in doing so, and in differing from the high authorities whom I have quoted, I have not seemed too self-opinionated.

*North Mall, Cork.*

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## PATHOLOGICAL SOCIETY MEETINGS.

### *21st of January,* 1854.

Dr. LAW, in the Chair.

### *Stricture of the Œsophagus.*

Dr. M'Dowel exhibited a specimen of stricture of the œsophagus, and gave the following details of the case:—

Simeon Whelan, æt. 60, admitted into the Whitworth Hospital, May, 1853. The patient was extremely emaciated and enfeebled, the symptom which he chiefly complained of was extreme difficulty of swallowing, solids were wholly incapable of being swallowed, and fluids only entered the stomach in very small quantities. When drinking he would apparently swallow three or four mouthfuls (four to six ounces), that is, the fluid would pass through the pharynx, but the patient himself would assert that it was stopped before it reached the stomach, and referred the seat of obstruction to the centre of his chest. After a period varying from one to four or five minutes, this fluid would be rejected by a slight effort, not amounting to vomiting. Sometimes all that had been swallowed was rejected, but generally a little was retained. No tumour was to be felt in the epigastrium.

Of the existence of stricture there could be no doubt, which we were inclined to believe was situated at the cardiac orifice of the stomach, as in such cases the œsophagus is very generally observed to be dilated into a pouch, above the narrowed orifice (like the crop on the œsophagus of the bird), capable of containing several ounces of fluid.

The history of the case was briefly this; there had been, for a considerable time, some degree of dysphagia, but not to such an extent as to interfere materially with his general health, as the patient was careful to select such articles of ood as were most easily swallowed. Two weeks efore his admission into hospital, the difficulty n swallowing became much greater and increased daily. Emaciation from this period progressed rapidly. He died a fortnight after admission, and so gradual was the extinction of life that the pulse had ceased to be felt at the wrist six hours before death.

*Examination after Death.*—A stricture of the œsophagus was found opposite the second dorsal vertebra. A twofold morbid condition existed; there was, in the first place, a narrowing of the œsophagus by a thickening of its tunics, forming a ring of dense unyielding structure. On its inner surface this constricted portion was ulcerated, and from the ulcerated surface there projected into the wider portions of the tube, above and below the immediate seat of constriction, three fungoid growths, composed apparently of encephaloid cancer; these were necessarily small where they were attached to the mucous surface, whilst their free extremities formed large tumours, smooth on their surface and globular, but of a dark red colour, from extravasation of blood, so as, at first sight, to present the appearance as if a mass of meat were impacted in the œsophagus. So much was the tube encroached on that a sinuous winding channel alone was left, so extremely narrow and tortuous, that the wonder was how any fluid at all could have passed through. The œsophagus was considerably dilated above the seat of the obstruction; no cancer existed elsewhere; all the other organs of the chest and abdomen were perfectly healthy.

Dr. M'Dowel observed that the history given by the patient was explained by the morbid appearances just described. The slighter degree of dysphagia which existed for a considerable period, was due to the circular constriction, in which all the tunics were involved, whilst the growth of the fungoid structure dated from the period, seven weeks before admission, when the difficulty of deglutition became suddenly greater, and increased, no doubt, exactly in proportion as the fungoid tumours became more developed.

Dr. M'Dowel thought this case of interest, as showing that the retention of fluid for several minutes in the œsophagus, and its subsequent rejection, are not conclusive of stricture at the cardia, but may exist equally in the case of stricture situated even so high as the centre of the œsophagus. If life could have been for a little prolonged, the fungoid growths would, in all probability have sloughed off, and the symptoms of stricture have, therefore, undergone a marked diminution.

With reference to the mere morbid anatomy of the preparation, two opinions may be entertained; first, that two forms of cancer were here combined to form the stricture, the outer firm constricted portion being scirrhus, and the softer growths, encephaloma. The second opinion, which appears the more correct, is, that there first existed a *non malignant* organic stricture of the œsophagus, the result of submucous effusion, analogous to that form of stricture of the rectum, termed by Mr. Collis the scirrho-contracted rectum; and that from the inner surface of this, there subsequently sprouted the softer growths of cancerous structure (encephaloma). Adopting this opinion, as to the sequence of morbid changes in the specimen under consideration, we may here see a resemblance to those cases in which cancer is developed in the cicatrices of ulcers or of burns. The tissue for which cancer appears to have a predilection is, in all probability, identical in all these instances.

### *Ulcerated Tumour of the Neck, proving fatal from Hæmorrhage.*

Dr. Banon exhibited the results of a *post mortem* examination of a patient, who recently died in Jervis-street Hospital from hæmorrhage of one of the great vessels of the neck, occasioned by strumous ulceration of the soft parts in this region. The subject of the case was a man aged 36 years, who acted as porter to an auctioneer, and who first came under Dr. Banon's notice about eight months since. At that period, large tumours presented themselves at each side of the neck, extending from a short distance below the angles of the jaws to the clavicles. Externally they were firm to the touch, and presented an irregular surface. The skin was, for the most part, of its natural appearance, but here and there presented a somewhat purplish colour, underneath which the swelling was softer than elsewhere. The tumours presented generally the scrofulous character, and were supposed to have originated in the glands of the neck. The external veins were enlarged and somewhat tortuous, but more particularly so over the right side of the neck and shoulder. The man's health was impaired, and he suffered from cough of a tracheal character. On examination the chest sounded well on percussion generally, but a slight dulness was observable under the right clavicle; here, also, the respiratory murmur was comparatively feeble. No other evidences of disease in any of the internal viscera presented themselves. Shortly after his admission to hospital, a small slough formed over one of the purple spots on the left side of the neck, before mentioned, which was succeeded in a little time by the formation of a similar slough at a little distance.

Both openings continued for some weeks to give exit to scrofulous pus and to sloughy cellular tissue. In this manner the greater portion of the tumours on the left side suppurated, the openings becoming filled up by pale, unhealthy-looking granulations, which showed, however, a gradual disposition to heal. At this period similar changes commenced to take place in the tumours on the right side of the neck, with this difference, that the sloughing and ulcerative processes here extended deeper, so as to cause serious apprehensions of the large vessels in this region becoming implicated. Two large oval openings had formed in the skin over the inferior portion of the sterno-mastoid muscle, and evidently extended very deep in the neck. The outline of this muscle could not be traced, the soft parts of this region, where not destroyed by ulceration, being converted into a strumous mass. Matters went on in this way until Friday, the 13th of January, when, whilst speaking to his wife, a sudden gush of blood took place from the upper opening in the neck, evidently from a large artery. One of the pupils who was present immediately applied pressure, and succeeded in completely arresting the hæmorrhage, by filling up the cavity in the neck with lint, saturated with spirits of turpentine. Dr. Banon visited him very soon afterwards, and in consultation with his colleagues, decided on not then further interfering. The hæmorrhage had ceased, and it was but too probable, that were the plug removed it might recur with, perhaps, increased violence, and the uncertainty of being able to controul it by pressure was evident from the bleeding artery being placed so low down in the neck. Besides, no confidence could be placed in the passing of a ligature under the circumstances, the parts surrounding the vessel, and probably the artery itself, being in a diseased state.

It was, therefore, determined to watch him closely, and only to attempt an operation in the event of the hæmorrhage recurring, and resisting all other means of controlling it. A very intelligent pupil was left with him during the night, and next morning the surgeons of the hospital again met Dr. Banon in consultation. No hæmorrhage whatever had taken place. The patient was nervous and weak, with a pulse varying from 90 to 100, from the first occurrence of the hæmorrhage. It was again determined not to interfere.

On the following night, about twelve P.M., a very slight oozing of blood took place from underneath the original plug, which had not been disturbed. This was immediately checked by resaturating it with the spirits of turpentine. From this time until the morning of the 16th, at ten o'clock, he had but one more slight oozing, which was arrested in the same way.

At this time a violent hæmorrhage occurred, and although Dr. Banon's colleague, Mr. Power, was in an adjoining ward, before he could reach the patient convulsions ensued, which precluded him from adopting active measures, and in a few minutes afterwards he expired.

*Post Mortem Examination.*—Body slightly emaciated. The left lung was studded over with tubercles in a crude state, on its pleural surface, the parenchymatous tissue being but slightly involved. Similar appearances were seen on the surface of the right lung, the apex of which was firmly adherent to the top of the thorax; a distinct and well-defined tumour, as large as a small orange, occupied this portion of the lung, which was, at first, supposed to be a specimen of the aggregated form of tubercle.

Upon being carefully examined, however, this tumour was found to possess a thick fibrous capsule, and to have originated in one of the bronchial glands, having extended, in a direction forwards and outwards, pushing the apex of the lung before it and occupying its place, and also extending in the opposite direction between the right bronchus and the trachea.

In this latter situation the diseased mass was in a softened state, and an opening had taken place, allowing a portion of its substance to escape into the trachea. This remarkable tumour had been examined by Dr. Lyons, under the microscope, and declared by him to be true scrofula. Great pains were now taken to trace the source of the hæmorrhage, and on examination the soft parts of the neck were found to be much disorganised, being, in fact, converted into a tuberculous mass, and in part destroyed by the sloughing and ulcerative processes. To such an extent had this destructive action proceeded, that the sterno-mastoid muscle and contiguous structures could not be recognized. The carotid artery was dissected, and found uninjured from its origin. Not so, however, the internal jugular vein, which, together with the subclavian, were so completely involved in the disease as to have become altogether impervious, as far as the right vena innominata. Water was now injected from the axillary artery towards the heart, the arteria innominata and the trunk of the carotid having been previously tied, and was observed to flow freely through the sloughy openings in the neck, thus showing that the hæmorrhage must have arisen from this source.

On careful dissection, however, it was found that no abnormal opening existed in the trunk of the subclavian artery itself, but that a large branch arising from it passed directly outwards through the slough, into which its open mouth could be traced. This vessel Dr. Banon considered to be the "transversalis colli artery," which, in this instance, appeared to have arisen from the subclavian itself, and not from the thyroid axis. Dr. Banon exhibited to the Society the diseased state of the parts in the neighbourhood of the vessel from which the hæmorrhage took place, and showed that it would have been quite useless to have attempted to pass a ligature around an artery in the condition in which this vessel was placed. He was also of opinion, from the difficulty which he encountered in the dissection, of separating the trunk of the subclavian artery from the diseased structures which enveloped it, that it would have been almost impossible to have secured it by operation during life.

. Banon considered that this case would ! interesting in a surgical point of view, respect to the question, how far surgeons l be justified in interfering, by operation, ses of a similar description. Their course oceeding would be, no doubt, influenced by sideration of the nature, situation, and ex- of the disease surrounding the bleeding l. In this instance, all who saw the case unanimous in recommending the course ued, and Dr. Banon felt convinced that the oers present, on witnessing the state of the as exhibited, and having heard the history e case, would, notwithstanding its unfortu- result, entertain a similar opinion. The also derived some interest from the fact of omplete obliteration of the large venous s on one side of the neck, whose function have been fulfilled by the smaller veins; t would be interesting to recollect, that the ficial veins of the right side of the neck houlder were observed, during life, to be ous and enlarged; on the left, those appear- were not present to the same extent, the se not having here extended so far as to im- e the deeper vessels.

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## SUMMARY.—MATERIA MEDICA.

*n Alum.*—Two preparations have recently employed in medical practice by Dr. Tyler ı, of London, under the name of *iron alum.* are stated to possess more powerful astrin- properties than common alum, and at the time are not liable to produce the usual lating effects of other salts of iron. It is known that the term *alum* is applied by ists as a generic designation to an extensive of salts, which coincide with common alum stitution and crystalline form, and in the osition of which the alumina may be re- d by any other sesquioxide. Thus we :—

| | |
|---|---|
| on alum | $Al_2 O_3 3 SO_3, + KO, SO_3 + 24$ aqua. |
| lum | $Fe_2 O_3 3 SO_3, + KO, SO_3 + 24$ aqua. |
| e alum | $Cr_2 O_3 3 SO_3, + KO, SO_3 + 24$ aqua. |
| nese alum | $Mn_2 O_3 3 SO_3, + KO, SO_3 + 24$ aqua. |

like manner, the potash of these salts may placed by other alkaline bases, such as soda monia; it is therefore evident that many salts to which the appellation alum, in its comprehensive sense, is applied, will con- no alumina whatever.

e preparation now used at St. Mary's Hos- is obtained by peroxidizing protosulphate n with nitric and sulphuric acids (as in st part of the process for preparing hy- d peroxide of iron in the *Dublin Pharma-* s), and adding an equivalent of sulphate of h. The solution is then to be evaporated with excess of sulphuric acid, until crystals form on cooling; it affords a beautiful salt of pale violet colour, which is more soluble than common alum, the solution having a reddish colour. The second salt known as iron alum is obtained by adding an equivalent of sulphate of potash to the sulphate of iron, and evaporating in the manner already described, so as to obtain crystals. As it is important that substances used in medicine should be strictly defined, the former salt ought to be designated *potassio-sulphate of peroxide of iron*, and when the ammonia salt is prescribed, it should be termed *ammonia-sulphate of peroxide of iron.*—(See *Pharm. Journal*, Jan., 1854.)

*Diabetes.*—Dr. Bence Jones, in a paper in the *Medico-Chirurgical Transactions* for 1853, and also in a lecture, in the *Medical Times* of February 4th, has directed notice to some facts connected with this affection. Although there is a very prevalent impression that the quantity of sugar in the urine of diabetic patients is in direct proportion to its increased specific gravity, and that it is even possible to calculate its amount by the aid of tables, founded on this assumption, he has demonstrated, from direct analysis, the absence of any such law, and shown to how great an extent the various other substances which are contained in urine must modify its density, and thus interfere with any conclusions based upon this point alone. The following numbers were obtained in the examination of two cases of diabetes, and are, further, of interest, as they exemplify the considerable variations in the specific gravity, and in the amount of sugar which may occur during the course of this disease.

CASE 1.

| Urine, Spec. Grav. | Grains of Sugar to the Ounce of Urine. | | Urine. Spec. Grav. | Grains of Sugar to the Ounce of Urine. | |
|---|---|---|---|---|---|
| 1023 | contained | 2·2 | 1030 | contained | 8·6 |
| 1025 | ,, | 2·1 | 1030 | ,, | 7¼ |
| 1026 | ,, | 4 | 1031 | ,, | 14½ |
| 1027 | ,, | 2·8 | 1032 | ,, | 17·5 |
| 1027 | ,, | 4½ | 1033 | ,, | 6 |
| 1027 | ,, | 4½ | 1034 | ,, | 8 |
| 1028 | ,, | 14½ | 1035 | ,, | 10 |
| 1029 | ,, | 8·8 | 1036 | ,, | 5½ |
| 1029 | ,, | 2½ | 1038 | ,, | 7½ |
| 1029 | ,, | 3 | | | |

CASE 2.

| | | | | | |
|---|---|---|---|---|---|
| 1013·8 | ,, | 5 | 1035·4 | ,, | 7 |
| 1014·4 | ,, | 5 | 1035·4 | ,, | 17 |
| 1023·2 | ,, | 14 | 1037·8 | ,, | 19 |
| 1025·6 | ,, | 2 | 1037·8 | ,, | 20 |
| 1028·5 | ,, | 4 | 1038·3 | ,, | 8 |
| 1029·6 | ,, | 4 | 1039·0 | ,, | 20 |
| 1030·0 | ,, | 15 | 1043·4 | ,, | 18 |
| 1031·0 | ,, | 10 | 1044·4 | ,, | 24 |
| 1031·2 | ,, | 2 | 1044·8 | ,, | 25 |
| 1032·2 | ,, | 24 | 1045·0 | ,, | 18 |
| 1032·4 | ,, | 16 | 1045·4 | ,, | 18 |
| 1033·4 | ,, | 13 | 1045·8 | ,, | 25 |
| 1034·0 | ,, | 16 | 1048·6 | ,, | 18 |

Dr. Bence Jones also remarks, with reference to the methods employed for determining the presence of sugar in the urine, that as they are now far more delicate, they are, therefore, perhaps, more liable to lead to erroneous conclusions than formerly. Care is further requisite in the use of these tests, not because the substance we search for is liable to be overlooked, but because other substances are likely to be mistaken for it. There is no single infallible test for diabetes, although there are many which, employed collectively, with care, will lead to a very decided opinion as to the presence of sugar. The general failing of all reduction tests (such as the reduction of the salts of copper), is that they lead to the opinion that sugar is present, where none, in truth, exists in the urine—other substances as well as diabetic sugar having the power of reducing salts of copper; and even if kept for many weeks, the test-liquid of M. Barreswill[*] will produce similar reaction with perfectly healthy urine, as if diabetes were present.

The occurrence of torulæ is not in itself a sufficient proof of diabetes, for they may form in the urine when no trace of sugar is present. It may be said these are not true torulæ, and differ in appearance from those found in diabetic urine; but the difference is so slight, that, in doubtful cases, it is not to be trusted. In support of this statement he adduces an extract from Lehmann's Chemistry, in which he says, "It must be remembered, that in healthy urine, by long standing, similar torulæ are formed. Such cells may occur even in very acid urine, though they are more common when it is neutral. Each cell, like the yeast cell, contains a nucleus. Usually the size is one-half less than the true yeast cell; but it must be remembered that yeast cells are much smaller when they form spontaneously than when they arise from other parent cells introduced from without. Moreover, the apparent size of bodies seen under the microscope is a very relative criterion."

In a paper on the habitual presence of sugar in the urine of old people, read before the Academie de Medicine de Belgique, by M. Dechambre, it is stated that experiments were made by him on twenty aged women, in the Salpetrière, and that in nineteen there was decidedly sugar in the urine. Dr. Jones does not, from his investigations, coincide with M. Dechambre's conclusions; yet he remarks, that, out of twenty-nine cases of diabetes which fell under his notice during the last three years, and of which he has kept notes, eleven were above sixty years of age, and six of these eleven above seventy years old. Nor is this the most important fact with reference to these cases. He is also of opinion that the disease in old age is generally milder and more chronic than at other periods of life. Next to old people, it appears that fat people best resist the progress of this disease, and in them the sugar not unfrequently, from time to time, is found to disappear from the urine.

With reference to treatment, he states, that although the various specifics which have been proposed from time to time, as permanganate of potash, rennet, so-called pepsin, arsenic, electricity, vichy water, creosote, opium, bark, iron, mineral acids, alkalies, &c., &c., have failed, still, when we look at the morbid anatomy, and the absence of all organic disease, we are induced to hope that further investigations may prove more successful, and lead to the radical cure of this disorder.

Regarding the employment of wine, of which M. Bouchardat permits the free use, to the amount of two bottles even of claret, in the day, Dr. Jones has found that this wine is usually perfectly free from saccharine matter, and therefore unobjectionable. The same may be said of Burgundy, Rhine wine, and Moselle; but sherry, port, Madeira, and Marsala contain amounts of sugar varying from two to thirty-four grains of sugar to the ounce. Porter, the use of which was allowed by Dr. Prout, afforded thirty-four to sixty-four grains of saccharine matter to the ounce, and the best bitter ale from fourteen grains to one hundred and thirty grains to the ounce; hence these fluids are unsuitable. Spirits, such as brandy, whiskey, rum, usually contain no trace of sugar, and hence they may be prescribed for diabetic patients.

Milk, which M. Bouchardat considers inadmissible, is found by Dr. B. Jones, from most careful experiments, scarcely to increase the quantity of sugar in the urine, even when it formed the sole article of diet.

*Adulteration of Muriate of Antimony.*—Instead of this preparation, the writer was recently supplied, in a most respectable wholesale establishment, with a quantity of impure muriatic acid, deeply coloured by a salt of iron; it contained not even a trace of antimony, and he has reason to believe was imported from England, where, probably, more of this substitution is in use.

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[*] M. Barreswill's test-liquid is prepared by dissolving 61 grains of crystallized sulphate of copper in 247 grains of water; then take 247 grains of tartrate of potassa, dissolved in a little water; to this add 864 grains of a solution of caustic soda, of specific gravity 1·12. The copper solution is poured into this, and the whole diluted to six cubic inches at 60°.

One-tenth of this quantity is taken, diluted with four times as much water, and heated to boiling. The urine, diluted ten times, is then dropped in from a graduated tube, as long as copper is reduced. The quantity of urine required contains ·8 of a grain.

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## JERVIS-STREET HOSPITAL.

### *Erysipelas, its Modes of Invasion; Clinical History; Pathology; and Treatment. Being the Substance of two Lectures on the Subject, delivered at Jervis-street Hospital, Session* 1853.

BY JAMES S. HUGHES, M.D., F.R.C.S.I.,
EXAMINER IN SURGERY IN THE QUEEN'S UNIVERSITY IN IRELAND.

### Part I.

**Erysipelas** has been very prevalent in parts of Dublin and its environs for some months past, but more especially in hospital practice, supervening not only on every species of wound, but likewise attacking persons apparently in health and free from local injury, thus approaching to, if not positively assuming, the character of an epidemic.

We have at present several cases of erysipelas in the hospital; we may, therefore, avail ourselves of this favourable opportunity of making some observations on the nature and treatment of that disease.

Erysipelas has usually been described as an unhealthy inflammation of the skin alone, or of the skin and subcutaneous areolar or cellular tissue; but this is too limited a description of the disease, for erysipelas is not invariably confined to the surface of the body, but may, as in the case of William Austin, spread from the face to the throat, and from thence extend to the larynx and bronchial tubes; it may migrate from the fauces to the pharynx and lining membrane of the gastro-intestinal canal; or it may, on the other hand, suddenly leave the surface of the body and attack the brain or its membranes, leading thereby to special, and not infrequently, fatal forms of internal inflammation.

Erysipelas presents itself under a great variety of phases; but for practical purposes we are in the habit of classifying it under either of the following forms, viz., the simple, superficial, or true erysipelas, the phlegmonous erysipelas, and the œdematous erysipelas. Since the month of October last we have, in this hospital, chiefly met with the first and second varieties of erysipelas; the regions most frequently attacked by the former were these of the face and head, whilst the latter was principally, if not altogether, confined to the lower extremities.

In true erysipelas the skin of the part affected usually assumes a peculiar red or rose tint, pervaded by a yellowish hue; but although this is the ordinary colour of the disease, yet erysipelas may, as we have lately seen, vary in tint from a bright scarlet to a dark red or dusky hue; when erysipelas spreads from a central point to both sides of the body, it frequently does so in a perfectly symmetrical manner, a feature of the disease which has been much dwelt on by Dr. Graves, and which was extremely well-marked in some of the cases lately under our notice, but more especially in those of Kelly and Austin, in the male Accident Ward. The redness in true erysipelas is defined by an abrupt *festooned* border; if the inflamed surface is subjected to pressure, the redness will disappear, but will rapidly return as soon as the pressure is withdrawn. There is no tangible amount of swelling in true erysipelas. Erysipelas has a great tendency to spread, the inflammation usually declining at the part first attacked; the disease may thus extend over a considerable portion of the body before it finally leaves the patient. When erysipelas is about to spread, the colour of its festooned border changes from its ordinary colour to a deeper red or more florid hue; by this change of colour, when conjoined with other symptoms, to which we shall presently refer, we have often been enabled to anticipate a renewed disposition to spread, where the inflammation had previously been in an apparently declining state. In forming our prognosis in erysipelas, we should, therefore, attentively examine the border of demarcation between the sound and inflamed skin. M. Chomel has directed the attention of the profession to a feature in erysipelas which he considers a most valuable one, as proving a tendency in the disease to extend itself from one point to another, viz., a red *elevation* at the line of limitation of the disease, which is, as he states, easily recognized, being about one line and a half in thickness. By its presence, M. Chomel thinks the physician can positively predict the periods of shifting of erysipelas, and that its absence, on the other hand, indicates the period of limitation of the disease. Vesications not infrequently make their appearance in erysipelas, which induced some writers on cutaneous diseases to group it with the class Bullæ; but true erysipelas frequently terminates in resolution, as it did in the case of Gaynor, in No. 6 Ward, under which circumstance the inflammation gradually subsides, the skin regaining its healthy condition, either with or without desquamation of the cuticle. When the cuticle becomes detached in the form of vescicles or bullæ, it gives way sooner or later, leaving, in general, the cutis beneath in a healthy state. Sometimes, however, especially in constitutions already enfeebled by want or intemperance, these vesicles run rapidly into troublesome, unhealthy ulceration.

True erysipelas is divided into idiopathic and traumatic; there are two instances of the former in the hospital, and of the latter four or five. The true idiopathic erysipelas, which has by some nosologists been classed amongst the acute exanthematous diseases, is usually ushered in by a well-marked feverish attack: thus, two or three days before the local inflammation exhibits itself, the patient is attacked with rigors, followed by nausea, and often by vomiting; he feels drowsy, suffers from headach, and perhaps delirium; his pulse becomes quick and hard, sometimes there is tenderness in the hepatic and epigastric regions, an intensely bitter taste on the mouth, a tongue thickly coated with yellow fur, together with a semi-jaundiced appearance of the eyes and surface of the body, under which circumstances the disease is properly termed bilious erysipelas.

In erysipelas the fever and local inflammation hold relative proportions to each other; thus, when the eruption appears, the fever, instead of subsiding, as in the true exanthematous diseases, generally in erysipelas becomes aggravated. The delirium in erysipelas usually assumes a low, muttering form, but sometimes it acquires an active character; thus at several of our visits we found that the patient Austin could be kept in his bed with difficulty, as he exhibited a constant desire to wander about the ward, and otherwise prove unmanageable. The delirium of erysipelas often sets in suddenly, a fact well exemplified in the case of Robertson, now convalescent in the Accident Ward; he was suddenly seized with delirium immediately after one of our visits, as evinced by a rambling, talkative state, which persisted for several days. If erysipelas is to terminate in death, we shall find that at each of our visits a greater amount of the inflammation has been superadded at one extremity of the diseased surface than has disappeared at the other; the colour of the erysipelas at the same time assumes a darker hue; the fever, which perhaps at first bore somewhat of the inflammatory form, now acquires a low, asthenic or typhoid character, delirium evinces itself, involuntary discharges of fæces and urine now frequently take place; coma next often ensues; under which circumstances, death generally soon follows. In the fever of erysipelas, however, as in other forms of low fever, the patient may be reduced to a very low condition, and yet, as we have seen more than once lately, he may recover: we should, therefore, in erysipelas, persist in our remedial measures to the last moment of life. In the latter stages of erysipelas the patient may, as in the other forms of fever, be seized with retention instead of incontinence of urine, a practical fact which the surgeon should always hold in recollection.

We possess no means by which we can predict the period over which erysipelas will extend itself, but, as a general rule, the disease may last from five to about twenty days, or more: thus, in Robertson's case, the erysipelas took about sixteen days to run its course, when it terminated in suppuration of both eyelids, and extensive desquamation of the cuticle of the face and forehead; whilst Austin's case, in the same ward, spread itself over a longer period. Although erysipelas seldom disappears under five days, yet we lately had an opportunity of witnessing a case in this hospital which terminated in resolution within four days; I allude to the case of Gaynor, in No. 6 Ward. In the recovery of a patient from erysipelas we are not to expect a marked crisis, for the amendment usually takes place in a very gradual manner, as it did, for instance, in the persons of Kelly and Austin: in their cases the delirium slowly but steadily subsided; the tongue, from being dark brown, dry, and retracted, gradually became moist at its edges, and cleaner in appearance; the pulse became softer and less frequent; the local inflammation gradually disappearing; and in this manner all the symptoms slowly but steadily improved, until a complete recovery was effected.

The danger in erysipelas is not to be reckoned so much by the extent of the local inflammation, as by the amount and type of the accompanying fever: thus, if the local disease, although spread over an extensive surface, should not be accompanied by much constitutional disturbance, then our prognosis may, *so far*, be a comparatively favourable one; whereas, on the other hand, the existence of a high degree of delirium, a tongue brown, dry, and retracted, and a pulse quick, weak, and compressible, indicate considerable danger. Erysipelas has such a tendency to spread, that, as long as the smallest amount of the disease exists, so long the patient cannot be pronounced out of danger.

Sometimes, in erysipelas, a sudden and unexpected formation of matter is established in a distant part of the body; thus, in a case of traumatic erysipelas of the upper portions of the body, which I am at present attending, in conjunction with Mr. M'Carthy of Capel-street, a remarkably sudden and extensive collection of matter has taken place over the right ankle joint.

A patient labouring under true erysipelas may, apparently, be going favourably through the disease, when the inflammation may suddenly disappear, under which circumstance the patient may perish from a rapid translation of the external inflammation to some internal vital organ, an additional reason for the formation of a cautious prognosis in any case of erysipelas.

Occasionally patients labouring under erysipelas will gradually sink from extreme exhaustion, although strenuous and well directed efforts have been made to support their strength from the very commencement of the attack.

Some pathologists assert that the areolar tissue is the primary seat of erysipelas, and that when erysipelatous inflammation attacks the skin, the serous, or the mucous membranes, that it is the areolar tissues entering into their formation that first become involved in the diseased action; however, erysipelas is now very generally, and, in my opinion, properly regarded as a true blood poison; it is subject to the same general laws, and requires the same methods of treatment which other true blood diseases demand, and it is now generally affirmed that the inflammation of the areolar and other tissues is secondary to, and dependent on, a previously vitiated condition of the blood.

Erysipelas has been considered by some authorities as essentially a contagious disease, whilst others refer its origin altogether to atmospheric causes. It can now be scarcely doubted, that to epidemic sources, whatever they may be, the great majority of cases of erysipelas are due; but it would be going too far, in the present state of our information on the subject, to assert, that erysipelas may not, at times, assume a contagious character, for which reason it is always advisable, especially in hospital practice, to take the precaution of isolating patients labouring under erysipelas.

Erysipelas sometimes prevails at particular seasons of the year, at which periods it not infrequently attacks several hospitals in the same city, defeating, for a longer or shorter time, the most energetic measures to arrest it.* When erysipelas prevails in an hospital, it materially interferes with the success of operations; thus I have been obliged, in the present epidemic, to postpone an amputation of the breast, and some minor operations, until the erysipelas shall have left our wards.

Erysipelas frequently attacks over-crowded and badly ventilated hospitals, and other public institutions; owing, however, to the remarkable cleanliness, and improved modes of ventilation of the hospitals of this city, we have for years past been comparatively free from erysipelas, except at such periods as the present, when the disease is apparently dependent for its existence on some peculiar conditions of the atmosphere.

I would now direct your attention to the cases of erysipelas of the face and head, at present in hospital. As the structure of the scalp renders it liable to certain forms of erysipelas, and likewise to peculiar terminations, we are in the habit of dividing erysipelas of that region into the idiopathic and traumatic, as well as into the superficial and deep-seated.

Idiopathic erysipelas of the face and head is most usually preceded by symptoms of pyrexia: the feverish symptoms having existed for two or three days, (twenty-four hours only in Gaynor's case); the erysipelas will make its appearance on the face and forehead, or, as in Austin case, in the neighbourhood of the ear, in the shape of a small red patch, which evinces a great tendency to spread. At first the patient does not complain of much pain in the part, but, as the disease advances, he generally suffers from a disagreeable prickling, or smarting sensation; the fever at this period increases. As the inflammation proceeds, it attacks the scalp; when it extends to the face, the eyelids often become enormously swollen and œdematous, the nose likewise swells, especially about the alæ; in extreme cases, the lips also become swollen and bloated-looking. When the inflammation of the face is at its height, the features of the patient become completely altered. We often find that the ears also become swollen, and matter, not infrequently, forms either in the eyelids or behind the ears; in these cases, vesicles often make their appearance on the forehead and nose. It has been remarked by some French writers, that erysipelas of the scalp is occasionally preceded by swelling of the glands of the neck, or in the neighbourhood of the jaw.* Although erysipelas of the face and forehead is usually ushered in by a considerable amount of constitutional disturbance, yet, in some cases, the local inflammation first manifests itself. Erysipelas of the face not infrequently extends from the lips to the interior of the mouth, and, sometimes, in this way it reaches the larynx and bronchial tubes, as it did in Austin's case, thus producing a form of bronchitis which may prove fatal. In erysipelas of the head the patient may suddenly die in a comatose condition, death being the result of inflammation of the brain or its membranes, as proved by *post mortem* examination; turgescence of the vessels of the cerebrum, or its membranes, together with serous or purulent effusion, either on the surface of the brain or in its ventricles, being the usual appearances which are, in such cases, discovered.

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* Thus, this city has, within our own recollection, been visited by several attacks of epidemic erysipelas. The particulars of two such epidemics have been ably and faithfully recorded by the late Drs. M'Dowell and Graves; the papers of these distinguished physicians are most valuable as pointing out the peculiarities of the epidemics referred to, and the treatment that was found most applicable to each form of the then prevailing disease.

The following is a well-marked case of idiopathic erysipelas of the face and head, complicated with bronchitis:—

*Reported by* Mr. Wm. Charles Ryan.

Case I.—*Idiopathic Erysipelas of the Head and Face; Supervention of Bronchitis; Mercurial Inunction; Recovery.*—Wm. Austin, æt. 36, a smith by trade, admitted January 12, 1853, under Mr. Hughes. The patient had been in Jervis-street Hospital for some time, labouring under syphilitic ulceration of the throat, and was discharged on Monday, the 3rd instant, in consequence of erysipelas prevailing in the institution. On Friday, the 7th instant, four days after his dismissal from hospital, he was seized with rigors, nausea, and insatiable thirst; soon after which he experienced a burning sensation in his left ear, which became red and swollen; the inflammation gradually extended to his face. On admission this day the left ear was greatly swollen, and of a dusky red hue, its borders being surrounded by a very large semi-transparent vesicle. The erysipelas has spread to the left cheek, involving the eyelids, which are nearly closed up. The erysipelas, which is intensely red at its borders, is defined on the upper lip and chin by the situation of the beard. Pulse 100, hard, and somewhat full; headach; tongue covered by a thick, yellowish fur; bowels confined.

℞ Antimonii tartarizati, gr. ij.
Aq. distillatæ, ℥ viij.
Sulphatis magnesiæ, ʒiv. M.
Capiat unciam tertiis horis.

The affected parts to be dusted over with finely levigated flour.

13th.—The medicine kept up a nauseated condition for a time; bowels opened during the night. The erysipelas has extended itself, the right ear being now involved, the inflammation being perfectly symmetrical on either side, and of an intensely red colour at its border, which, through a magnifying glass, appears slightly raised above the surrounding healthy integuments. Pulse 120, less full; tongue brown, dry, and retracted.

Omit the antimonial mixture. The inflamed parts to be smeared over with half a drachm of mercurial ointment.

℞ Ammoniæ bicarbonatis, ℈j.
Suc. limonum ad sat. plen.
Mist. camphoræ, ℥ vjss.
Syrupi simplicis, ℥ss. M.
Capiat coch. mag. duo tertiâ qua horâ.

14th.—Very delirious throughout the night. The nurse found great difficulty in keeping him in bed, as he was constantly getting up and endeavouring to ramble about the wards. The erysipelas has extended itself to the lips, interior of the mouth, and fauces; on the back of the pharnyx there is a very unhealthy-looking ulcer; the patient complains of a sense of suffocation, and has a frequent cough. On examination of the chest there is evidence of bronchitis over the entire region of both lungs. Pulse 130; very weak; tongue black and dry, protruded with difficulty.

One drachm and a half of mercurial ointment to be applied over the inflamed surface on the face and forehead.

Eight ounces of red wine.

Beef-tea as a drink.

A large sinapism to be applied to the anterior surface of the chest for twenty minutes.

15th.—Mercurial fœtor and tenderness of gums; erysipelas declining; coughed less; still evidence of bronchitis, but of a less intense character; he raved some during the night, but was not so unmanageable as at last report. Tongue not so dry or dark; pulse 120.

Omit the mercurial ointment.

Continue the wine and beef-tea.

17th.—Slept well; no delirium; cough less troublesome; sonorous rales still to be heard over both sides of the chest. The erysipelas of the face is rapidly disappearing; the cuticle is beginning to desquamate on the forehead and nose; the patient is much annoyed by the ulcer of the pharynx. Pulse 130; weak. Ordered—

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* In corroboration of which, I here may state, that I lately saw a case of extensive erysipelas of the face and forehead, which, being preceded by tumefaction in both parotid regions, was, in the commencement, looked on as a case of mumps.

Mist. ammoniæ sat. ut antea.
Vini rubri, ℥x. Arrow-root.

The ulcer in throat to be brushed over with a strong solution of nitrate of silver.

19th.—Coughed more during the night; has some difficulty of breathing; evidences of bronchitis more marked; cuticle on face desquamating rapidly.

Vesicat. mag. inter scapulas.
Mist. expect.
Repeat the wine and arrow-root.

20th.—Much relieved by the blister, which rose well. Coughs less frequently.

Repeat the wine, beef-tea, and arrow-root.

24th.—Patient is now rapidly advancing to convalescence.

This patient was dismissed cured on the 5th of February, 1853.

The deep-seated form of traumatic erysipelas of the scalp is most frequently the result of a punctured wound, involving the tendon of the occipito-frontalis muscle and the areolar membrane beneath it. But, although in these cases the inflammation originates in these structures, it ultimately extends itself to the adjoining textures. Sometimes, as in Bateson's case (under Mr. Banon's care in No. 3 Ward), this deep-seated erysipelas is not the result of a punctured wound of the scalp, but may be caused by erysipelas spreading from a wound of the face to the head. In this disease we find, from about the second to the third or fourth day, a circumscribed tumour, which is hard, painful, and accompanied by a high degree of fever, and not infrequently by delirium. If a case such as the foregoing is not met with both promptness and judgment, the inflammation will spread along the areolar tissue, beneath the occipito-frontalis muscle, and irreparable mischief may be the result; thus even the bones of the cranium may become carious, and the patient eventually die of inflammation of the brain. In these cases the scalp resists the destructive process to almost the latest period of the disease, owing to its peculiar vascular supply. In this deep-seated form of erysipelas of the scalp, the swelling is usually limited by the insertion of the occipito-frontalis muscle, the eyelids and ears not usually being involved in the disease; however, the superficial and deep-seated forms may co-exist, as in the case of Bateson, already referred to, under which circumstances you will, of course, be prepared for both the eyelids and ears becoming affected by the inflammation. In this deep-seated erysipelas of the scalp, the local symptoms almost invariably manifest themselves before the constitutional disturbance sets in.

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# WHITWORTH AND HARDWICKE HOSPITALS.

## *Acute Rheumatism; Endocarditis followed by Pericarditis and Pleuro-pneumonia.*

BY JOHN T. BANKS, M.D.,
KING'S PROFESSOR OF PHYSIC.

*Reported by* MR. W. M'NAMARA.

M. Burke, æt. 16, admitted into the Whitworth Hospital on the 15th of November. A month before admission, in returning to Ireland from Liverpool, was exposed to wet and cold; a fortnight after this exposure he was seized with pain in his right ankle, and subsequently the knee of the same leg was attacked; there was not much swelling; almost all the joints were affected in succession. He was completely incapacitated from making the least movement without suffering much pain. He stated that he had never experienced any pain or uneasiness about the heart. The pulse was 108.

Percussion did not disclose any increased extent of dulness, but a loud bruit was audible at the apex of the heart, which entirely obscured the first sound. The second sound of the heart was perfectly normal.

Four leeches were applied to the cardiac region, and he was ordered three grains of hyd. cum creta, with a quarter of a grain of opium every third hour.

Nov. 20th.—Marked subsidence of the pains in the joints, but no diminution of the intensity of the endocardial murmur. Gums slightly affected by the mercury.

24th.—Scarcely a trace of pain or uneasiness of the joints; the bruit louder, and the second sound has acquired a certain degree of roughness. On being questioned as to his sensations, he declares that he does not feel anything unusual about his heart. He is fully under the influence of mercury.

Three leeches were applied to the region of the heart.

Nov. 25.—A friction sound is heard about an inch to the right of the left nipple. Pain and a sense of oppression about the precordia; the countenance has assumed a distressful expression; a quarter of a grain of opium every third hour.

28th.—Dulness on percussion, extending from the third to the seventh rib, and from middle of sternum to an inch to the left of nipple. Friction sound most intense at the base of the heart. There is an evident bulging forward of the left mammary region. On measuring the distance from the fourchette of the sternum to each nipple, it was found that the left exceeded the right by half an inch.

The circular measurement of the left chest exceeded the right by half an inch also.

He passed a sleepless night, and complains much of dyspnœa and frequent cough.

Nov. 30th.—Much precordial pain, particularly on attempting to lie on the right side; pressure upwards beneath the false ribs greatly increases the pain and oppression. Friction sound audible over an increased extent of surface; the endocardial murmur can be distinguished at the apex of the heart.

Vesicatorium regioni cordis.

Dec. 2nd.—Nights passed with little sleep, owing to pain and oppression of breathing.

Friction sound almost conceals the bruit; the heart's impulse perceptible over a considerable extent, with an undulating motion. A vibratory thrill is communicated to the finger placed beneath the nipple. Respiration very rapid, and countenance indicating great suffering.

Dec. 5th.—Signs of pleuro-pneumonia at base of right lung. Pulse 140; respiration 34. The pericardial friction sound is not heard over so great an extent, nor is it so rough as heretofore; pressure causes it to be heard more extensively. The bruit is again distinctly audible.

The dulness has extended downwards.

℞ Cal. gr. i.
Opii, gr. ss. in pil. i. 3tiis horis.
Cucurbit. cruent. ad ℥iij. lat. dext.

6th.—Unable to lie down.

8th.—No pain even on deep inspiration at right side; air again freely enters; no crepitus; he is again under the influence of mercury; pericardial friction no longer audible; a leather creak sound heard at intervals; endocardial sound continues; he can now assume the recumbent posture.

12th.—No friction phenomena; still base of right lung comparatively dull.

15th.—Acute pain, augmented by inspiration at lower and posterior part of left chest; friction sound in same situation; unable to lie down, except for a short time on right side; he generally spends the night almost upright, and only sleeps in broken snatches. Pulse 140; respiration 52.

17th.—Has slept last night on right side, and is free from pain; face free from anxiety.

℞ Iod. potas. gr. iij.
Decoct. hemidesim. ℥i. ter in die.

From this period progressive improvement manifest.

February 13th.—General health much improved; the heart's action still very rapid, but regular. Pulse 120; the wave-like impulse continues; the extent of cardiac dulness not in proportion to extent of impulse; left chest measures three-fourths of an inch more than right; the endocardial murmur at apex loud; the second sound of the heart perfectly natural.

The only difference he now experiences from his former state of health is a liability to palpitation, and difficulty of breathing on even slight exertion.

Of the many cases of acute rheumatism, with cardiac inflammation as an accompaniment, which come under the observation of the clinical physician, there are a few in which, from the severity of the disease, and from the nature of the complications, life is in present and imminent danger, and as manifestly belonging to this class the case reported may form the subject of a brief notice.

This patient had laboured under rheumatism for a fortnight before admission into hospital, and immediately on being received, an examination of the heart proved that endocarditis was also present; but at what period it had commenced, whether it had come on in the course of the rheumatism, or whether it had been cotemporaneous, it was impossible to ascertain, as it had not proclaimed itself by any symptoms which called attention to the suffering organ.

The existence of this most serious lesion was only discoverable by one sign, namely, the endocardial murmur; there was no pain referrible to the heart; no intermittent or irregular action; no augmented impulse; and, even after his attention was directed to the heart, he was utterly unconscious of any deviation from the ordinary state in health. A period elapsed during which the symptoms of rheumatism underwent a marked amelioration, scarcely a trace remaining of pain, or uneasiness of the joints; the system, also, being fully under the influence of mercury. Now, the signs and symptoms which appertain to pericarditis, in its most manifest form, announced themselves, and this in an individual whose heart had previously been the seat of inflammation, latent in its nature, and unrecognizable save by one acoustic sign.

The invasion of pericarditis, in this case, when ptyalism was established, proves how groundless is the opinion of Niemann, and others, that the mercurial treatment of rheumatism, carried to such an extent, has any power in preventing those formidable complications which so often are the starting point of structural change in the heart, rendering it one of the most dangerous diseases, at least in its remote and probable termination.

As regards the physical signs in this case, one may be referred to, particularly, as not often present, or, perhaps, more correctly speaking, not often observed in pericarditis, viz., dilatation of the precordial region, not merely ascertainable by measurement, but also perceptible to the eye, at the first glance directed to the contour of the chest. That this sign of copious pericardial effusion is more frequently present in young persons, than the histories of the disease would lead us to suppose, I am inclined to believe.

The undulatory motion which was observed in the left manmary region continued after the effused fluid had been absorbed, and after adhesion of the pericardium had taken place, thus disproving the supposition of Senac, that this phenomenon depends upon the agitation of the fluid by the heart's movements. The explanation of Dr. Sibson, which assigns a peculiar impulse of the heart as the cause of the undulatory movement seems more likely to be the true one.

It has been observed by Dr. Latham, that the inflammation of the heart, which is most perilous in itself, is most frequently accompanied with inflammation of the lungs, adding immensely to the danger. In this instance life was in extreme jeopardy, when the pleuro-pneumonia supervening appeared to take away every chance of extrication from a state which was all but desperate; still, after a fearful struggle for life, present danger passed away, and the malady was arrested, leaving behind, however, in an adherent pericardium, and a damaged valvular apparatus, the germ of future disease.

Much difference of opinion still prevails as to the remote consequences of obliteration of the sac of the pericardium; but I apprehend all are agreed in believing that an injury to a valve, likely to be an abiding lesion, almost invariably lays the foundation of permanent disorganization of the heart, which slowly, mayhap, but surely, proves destructive to life.

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## MEATH HOSPITAL.

### *Clinical Lectures on Diseases of the Kidneys.*

BY DOCTOR LEES.

*Reported by* MR. ARTHUR SAMUELS.

### *Bright's Disease.*

M. Ledwich, tobacco-pipe maker, æt. 33, of a very pallid appearance, was admitted to the Meath Hospital, with general anasarca. He states that he was, in early life, of intemperate habits, but that he enjoyed pretty good health, except for a bad stomach and occasional attacks of vomiting and diarrhœa, till eighteen months ago, when he was suddenly attacked with pain in the loins, his urine became scanty, and dark as porter, soon followed by swelling of his feet. For this he was cupped over the loins, and put under treatment at the Whitworth Hospital for five weeks, at the end of which time the œdema had quite disappeared, and he was able to resume his employment.

In about six weeks after this, however, he fell down suddenly in a fit, on recovering from which he found he had ptosis of the right eyelid, which has continued ever since, and is sometimes accompanied with double vision. There was slight paralysis also of the muscles of the tongue and right leg, which lasted for a few days, but for three months after he was subject to frequently-recurring attacks of vertigo, attended with a feeling almost amounting to unconsciousness. The present illness commenced six weeks ago with œdema of the feet, extending in four or five days over the entire body; for a week previously he had every morning severe vomiting and retching.

His occupation exposed him to great vicissitudes of temperature.

He now is generally anasarcous, complains of troublesome cough, dyspnœa, and some flatulence of the stomach; skin very dry; tongue white and moist; pulse 72, small and weak; heart's impulse very feeble, but both sounds heard distinctly; no headach nor drowsiness; bowels regular; the urine, which is scanty and high-coloured, gives a very slight acid reaction with litmus paper, and is found, by test of nitric acid and heat, to be albuminous, sp. gr. 1010. He was ordered a mixture of polygala with carbonate of ammonia, to be dry-cupped at the base of both lungs, and to have meat diet with wine. Under this treatment he improved much; the anasarca diminished; his urine became plentiful and clear; but as the albumen in the urine and low specific gravity still continued, he was now put on

℞ Ferri ammoniæ tartrat. ʒi.
Aquæ ℥vi.
St. ℥i. ter in die.

A vapour bath twice a week, and to be clothed in flannel.

This case presents many points of interest, and is particularly useful as presenting what I consider to be a type of this form of disease, the patient's statement describing accurately the most usual way in which it commences, and its subsequent progressive stages. Although, on admission, his complaints were referred to the stomach and chest, and his body was anasarcous, yet I think I can satisfy you that the cause of all his symptoms was seated in a part of which he made no complaint, and which he was not even aware was in any way affected. Now as the information derivable from the examination of the urine is of the greatest importance for our diagnosis, and can be made obvious to the youngest pupil, I will first examine this excretion to see in what respect it differs from healthy urine, then briefly enumerate the fallacies you are liable to in making the examination, and show you the way to avoid them. The appearance of this specimen of urine does not differ from that of health, it is of an amber colour, its reaction acid with a very slight cloud floating towards its lower part, but on examining further, we find that it contains albumen, a substance not present in healthy urine; its specific gravity is very low, and it is very deficient in urea, which is the chief form by which the nitrogen of the decomposed tissues and superfluous food is eliminated from the system by the urine. Mr. Leet, one of our most intelligent clinical pupils, has made a careful analysis of this man's urine, which will prove to you what a great deficiency there is, not only in the urea, but also of all the other saline constituents which are found in healthy urine, and which Mr. Leet has made more striking by comparing it with a similar amount of healthy urine.

The following is the mean of three analyses of his urine excreted during the first week of February; it was pale straw-coloured, deposited no distinct sediment, and had a faintly acid reaction. Its specific gravity was 1010.5, and the secretion contained in 1000 parts:—

| | |
|---|---|
| Water | 975.8 |
| Solid constituents | 24.2 |
| Urea | 4.3 |
| Uric acid | 0.6 |
| Fixed salts | 1.5 |
| Phosphates of lime and magnesia | 0.3 |
| Alkaline salts | 1.2 |
| Albumen | 17.1 |
| Organic matters and ammonia salts | 0.7 |

| | Abnormal. | Normal. |
|---|---|---|
| Quantity of urine | 26.088 | 44.088 |
| Specific gravity | 1010.5 | 1018.9 |
| Water | 11316.4 | 18949.6 |
| Solid constituents | 275.6 | 609.9 |
| Urea | 51.4 | 270.7 |
| Uric acid | 9.1 | 7.6 |
| Fixed salts | 15.2 | 150.5 |
| Organic matters | 4.9 | 181.1 |
| Albumen | 195.0 | 0.0 |

This table gives the amount and entire composition of the patient's urine as it is excreted in twenty-four hours, contrasted with the normal standard as estimated by M. A. Becquerel.

We have now ascertained three very important facts, which are of essential consequence to our diagnosis: first, the presence of albumen in the urine; secondly, its low specific gravity; thirdly, the absence of urea. But what has become of the urea? has it been converted into albumen, as was at one time supposed? No; Dr. Christison has long since ascertained that this conversion never takes place, but that the urea is retained in the blood, not being eliminated by the kidney; the blood is, at the same time, very deficient in albumen, also in hematosin or colouring principle, and it contains an increased proportion of fibrin. We now come to examine the sediment, or rather slight cloud, which you see floating towards the lower part of the vessel; and placing a drop of it under the field of the microscope, I can detect a few amorphous granules, with some sections of cylinders presenting a granular appearance, evidently casts of the minute uriniferous tubes composed of fibrin, with disintegrated epithelium, which has become detached from the basement membrane of the tubes, and subsequently washed out with the urine. I cannot detect any blood corpuscles in it, nor could Mr. Ledwich, who has examined it carefully under the microscope. I therefore would designate this as a case of chronic desquamative nephritis, one form of that disease which has received various names—"Bright's disease," "albuminuria," "granular degeneration of the kidney," by which terms we understand a condition of the system characterized by certain changes in the blood and urine, followed by alterations in the structure of the kidneys, and complicated with various secondary affections.

I have been particular in these details, as I know that the junior students seldom have accurate ideas on the subject, and yet it is of great importance to be able to detect this disease, not only in medical, but also in surgical practice, for it is occasionally a cause of death after operations, particularly on the urinary organs, or in cases of old strictures of the urethra; in fact, any injury to the system may be followed by rapidly fatal results, if this disease be present. Sir B. Brodie, in one of his lectures on the urine, states, that in the simple operation of applying a ligature for internal piles, which he had performed nearly four hundred times, he had only lost three cases, and each of them had albuminous urine with disease of the kidney. He also mentions, that in most of the fatal cases of lithotomy, there has been organic disease of the kidney. It is a curious fact, that patients affected with this disease are very liable to secondary hæmorrhages after operations or any injury; this is probably due to the peculiar morbid state of the blood, inseparable from this state of the system, as it is highly azotized by the urea circulating in it, and the divided vessels do not appear to close by the usual process of coagulation and adhesion, probably owing to the deficiency of albumen; it has also been observed that women, who are the subjects of this disease, are very liable to severe hæmorrhages after delivery. The earliest symptoms in this man's case were referred to the stomach, and I wish particularly to impress this on you, as many cases are treated as mere dyspepsia, and even for organic disease of the stomach, though all their symptoms are caused by this disease, the stomach being found perfectly healthy after death, although they may have suffered from frequent vomiting during life, as occurred in the case of a wretched-looking man, much emaciated, aged 43, who was admitted into the hospital under my care, complaining of frequent vomiting. He stated that he was a tailor, had always worked hard in confined rooms, and led a very intemperate life; he vomited blood about twenty years ago, and since that time had been subject to frequent vomiting of a sour greenish fluid, generally in the morning, accompanied by severe headach; he seldom vomited *soon* after taking his food; and for a long time he had been subject to occasional attacks of hæmoptysis. He was remarkably pallid, and, on admission, complained chiefly of vomiting every morning when fasting, and occasionally at different periods of the day; he had no appetite; bowels much confined; he suffered from constant frontal headache; and complained of tenderness on pressure over the epigastric region, which was slightly distended and tympanitic. All these symptoms indicated disease of the stomach, but the peculiarity of the vomiting occurring in the morning, previously to his taking food, the remarkable pallor of his skin, which presented more the appearance of a person suffering from severe hemorrhage, than the peculiar hue characteristic of malignant disease, but, above all, the long duration of the vomiting, without any more decided evidence of structural disease in the region of the stomach, made me suspect that the cause of the vomiting did not exist in that viscus. On further inquiry I found that he suffered from occasional pains across the back; and though he said he never observed anything wrong with his urine, yet it proved, on examination, to be very pale-coloured, feebly acid, the quantity passed not being more than natural, yet with a specific gravity of only 1010; no deposit or sediment appeared in it, but it afforded a copious precipitate of albumen on applying heat, and on the addition of nitric acid: the quantity of urea was very small, and, under the microscope, a few epithelial cells and oil-globules could be seen. *He had no dropsy, except a slight serous infiltration under the conjunctivæ of both eyes.* I, therefore, made the diagnosis that the vomiting was sympathetic with disease of the kidneys, most probably fatty degeneration. He soon after left the hospital; but I fortunately recognized him in the South Union workhouse, and saw him occasionally there, with my friends Drs. Mayne and Shannon, until his death, when, through their kindness, I was enabled to examine his body.

He was greatly emaciated; on opening the abdomen the *stomach was found to be larger than natural, but in other respects healthy;* there was a small quantity of serous fluid in the peritoneum; the liver was soft, and presented the appearance usually termed fatty; the kidneys were enveloped in a large mass of adipose tissue, they were somewhat smaller than natural, and felt very hard; the capsules tore off easily, and their surface appeared granulated, with small, irregular projections of a whitish-grey colour, here and there mixed with patches of stellated vascularity. The notch of the kidney by which its vessels enter was loaded with fat. On making a section of the kidney the cortical substance presented a peculiar waxy, brittle appearance; the urinary pyramids appeared small and compressed, surrounded by the cortical substance, and by large quantities of pure fat, interspersed between the proper structure of the kidney and its membranous reservoirs; on placing a section under the microscope, the quantity of fat-globules distending the epithelial cells,—and thus choking up the convoluted tubes, which are lined by them,—compressed and obscured the Malpighian bodies. The tubes of the urinary pyramids were also filled with fat.

I would, therefore, advise you never to commence the treatment of a case of dyspepsia, particularly if there be vomiting in the morning, without examining the urine; in fact, gastric symptoms are often the most troublesome of the secondary affections in this disease; they are usually present, in a greater or less degree, throughout its course, and may vary, from a sense of weight and distention, with flatulence, after meals, to the constant vomiting of every kind of food, so that the patient may die from actual starvation. It is probable that in these cases the vomiting is caused by the retention of noxious materials in the capillaries of the kidney, causing mechanical irritation of its substance, analogous to what occurs in the case of calculus in the kidney; or it may be owing to the poisoning of the system by the morbid condition of the blood, by which means the gastric juice becomes vitiated by mixture with urea and other excrementitious matters. Pathological chemistry has established the fact, that in malignant cholera, and in other diseases in which the secretion of urine is very scanty or suppressed, the matters vomited contain urea, or the muriate or carbonate of ammonia derived from its decomposition; this would also account for the diarrhœa which he suffered from, and which has been so often observed in these cases, as to entitle it to be considered as one of its secondary complications, particularly as urea has been detected in the excrements. The next symptom we have to consider is, the occurrence of pain in the loins, accompanied with scanty, high-coloured urine, and œdema of the feet, probably owing to a subacute attack of congestion of the kidneys, caused by suppression of the cutaneous perspiration, thus throwing increased action on the kidneys, in order to eliminate by them the nitrogenised excrementitious material which ought to be discharged by the skin, and which, by being retained in the blood, causes obstruction in the inter-tubular capillaries of the kidneys; thence result distention of the Malpighian capillaries and the arteries. Serum transudes from them into the tubes, fibrin coagulates in them, entangling some of the desquamated epithelial cells, which escape with the urine in the form of the epithelial casts, mixed with blood corpuscles and albumen, which form the dark red or brown sediment that we find in these cases. When the attack occurs in an aggravated form, the circulation is impeded in the general systemic capillaries, and we have then that peculiar and dangerous form of dropsy, which is termed acute anasarca, so that the proximate causes of albumen in the urine, and of dropsical effusions into the cellular tissue, depend on analogous conditions, an arrest of impure blood in capillary vessels, and a consequent effort to remove engorgement and over-distention of the vessels by a process of serous secretion or transudation through their walls. In the next lecture we will proceed to consider the effects of this disease on the nervous system.

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## *Cases of ruptured Urethra, Perineal Abscess, and Urinary Fistula.*

BY MAURICE HENRY COLLIS, M.B.,

SURGEON TO THE HOSPITAL.

CASE I.—*Perineal Abscess; Effusion of Urine.*—Ten days after Donnybrook fair, a carman came to the Meath Hospital, and stated that on the last night of the fair he had fallen, when tipsy, astride a cart wheel: he felt a little uneasiness after the accident, and had a slight but increasing fullness and sense of weight in the perineum: he had never had a stricture, nor had he experienced any difficulty in making water since his fall, until the evening before he presented himself at hospital; he was then again tipsy, and suddenly felt something give way in the perineum; he endeavoured to pass water without success, although he felt his bladder relieved. On examination, the perineum was found hot, very prominent, of a dusky red, and presenting a slight sensation of fluctuation, a circumstance not very common in abscess in that region. The scrotum was pale, and œdematous; the urine had not passed upwards along the cord. A free incision was made at once in the central line of the perineum, three inches in length, reaching back close to the verge of the anus. The matter lay at a great depth (four inches), and was evacuated with great rapidity, the incision contracting rapidly; the effusion into the scrotum passed out freely, without requiring any further opening. A poultice was applied over all for a couple of days, when the sloughs cleaned off, and the urine, which at first had flowed freely through the incision, began to dribble away by the natural passage: no catheter was used in the subsequent treatment, and the case was left to nature, with the exception of passing a bougie of full size every second day, after four weeks had elapsed, with the view of preventing any irregular adhesions or stricture at the seat of injury, and not until the water had ceased to flow through the perineal opening. At the end of the sixth week he was discharged cured.

CASE II.—*Lacerated Urethra.*—An old pensioner was brought into hospital at 2 A. M. He had been kicked severely by a policeman in the perineum and scrotum about two hours previously: he had passed water just before the assault, and had not tried to pass any after it, as the resident pupil, who was the first to see him, very properly cautioned him against doing so. He complained of great pain, and both perineum and scrotum were distended, dark red, and hot; he was also bleeding smartly from the urethra. A very short attempt proved to me that the state of laceration of the perineum was so great, that it would be next to impossible to pass a catheter; the arterial hæmorrhage from the urethra left no alternative but to lay bare the ruptured vessel, and secure it, if possible. I accordingly cut with caution upon the point of a staff which was passed down to the injured part; immediately several clots were forced out with a gush of arterial blood. The depth of the vessel made it impossible to seize it, but I found that the bleeding was controlled by pressure, which I applied by plugging the wound firmly with sponge and lint.

At nine in the morning these were removed; the bleeding, though less, was still arterial. After the man had passed water through the wound, the plugs were again inserted, and removed at intervals to allow of micturition, until all hæmorrhage ceased. Suppuration was established at the end of thirty-six hours, when they were finally withdrawn. The sloughs were of trifling extent, and soon separated; and, with the exception of a small abscess in the scrotum, there was no check to the healing process; the urethra became gradually re-established as a passage for water, and the perineum closed up in about seven weeks from the time of the injury; the water passing in a tolerable stream. Up to this time, no instrument had been passed into the bladder. I deemed it better practice to allow the canal to heal as completely as possible, rather than risk doing mischief by repeated interference; so that when I found one or two efforts to introduce bougies unsuccessful and attended with hæmorrhage, I gave up the attempt, until the closure of the perineal opening gave assurance of the urethra being also healed. The man was then transferred to the extern list, and attended for a time upon alternate days. Upon introducing a bougie it was evident that the canal was tortuous and granulated; the smallest touch at first brought on hæmorrhage and pain; but by steadily pressing a full sized bougie against the stricture for a few minutes the sensibility of the granulations was lessened, and a smaller instrument could then be introduced into the strictured portion. By slow degrees he was advancing to a cure, when he ceased to attend, owing, I believe, to his getting a sum of money as compensation from the police, and as long as it lasted I heard that he was never sober. Of the subsequent history of his stricture I know nothing.

CASE III.—*Fracture of the Pelvis; Urinary Fistula.*—Patrick Walshe, a railway labourer, æt. 35, admitted into the Meath Hospital, February, 1853. Three years ago, a heavy weight fell upon his right hip; this was followed in four days by an abscess in the perineum; upon the opening of this abscess, urine passed through the wound: in course of time, urinary fistula was formed, connected with stricture. Four months after the accident, he sought relief for these affections in one of the hospitals of this city: he states that the opinion of the surgeons there was, that the right ramus of the pubis had been fractured by the original violence, and that the lacerated urethra had subsequently become either obliterated, or so tortuous as to be impermeable to instruments. An effort had been made by incision to find the canal, but failed, owing to the impossibility of getting a staff into the bladder; and he was discharged, after some months, with but trifling improvement. On examination, the perineum was found cleft by a deep fissure, with thick callous inverted edges; a fistulous opening was found in the bottom of this fissure, which led into a sinus of some extent, which, after running near the rectum, turned upwards towards the triangular ligament, and ended apparently in a small cavity; the entire quantity of the urine came drop by drop through this fistula, and the man's life was rendered miserable by the excoriation and the filth in which he was obliged to live. For upwards of three weeks I persevered with almost daily trials to get an instrument into the bladder by the urethra: at last I succeeded in passing a staff (No. 6), by a route which appeared to lie from a quarter to half an inch below the normal position of the canal under the pubis: by degrees, the dilatation advanced until No. 12 was passed with ease at the end of two months. The urine was regularly drawn off by catheter, but in spite of all care it still dribbled away by the fistula: the man had not full control of his water, and was unable, from irritable bladder, to wear an instrument for any length of time. There was a gradual but slow improvement in the state of the fistula, in proportion as the calibre of the urethra was restored: he, however, became impatient, and thought that by passing a catheter daily for himself he would be able to work.

In November, 1853, he returned, with most of his symptoms aggravated: there were now two sinuses leading into the cavity before mentioned, one in front of the anus, and the other at the right tuber ischii. In a month I was able to pass No. 12. On December 2nd, I operated on the fistula: a staff was first passed into the bladder, and a probe into the sinus beside the ischium; the two could not be brought in contact, owing to the communication of the urethra with the cavity not being on a line with the opening of the sinus. I now passed a narrow knife along the probe, and cut with it in the direction of the second sinus; having laid the two into one, I passed my finger into the cavity, and using it as a wedge, I cut in the mesial line towards the curve of the staff; getting the knife into the groove anterior to the internal orifice of the fistula, I ran it back until the canal was laid fairly open through the injured portion. The perineum was found to be converted into a brawny mass, in some parts of almost cartilaginous hardness; in others so friable as to break up under the finger; the hæmorrhage, as might be expected from such a state of things, was considerable, but was easily controlled by a *cannule a chemise*; free suppuration ensued; the urine passed for a week by the perineum: I then introduced a catheter (No. 7), and left it in the bladder; opium had to be given to a large amount before the instrument would be borne by the bladder. A larger instrument was passed and left in, as soon as urine began to flow at all by the perineum, until we again got to No. 12; the size of the urethral orifice prevented our using any larger instrument: gradually the hard rugous edges of the fissure in the perineum fined down, and the fistula contracted. The only treatment used in addition to the catheter was the application of strong pressure upon the perineum, made by pads and bandages; by this means, the cavity was obliterated. A month after operation, the constant use of the catheter was given up, and a large bougie was passed every night. The power of retaining the urine was now perfectly restored, and when he left hospital upon the 28th January, 1854, he was able to pass water in a full stream, and none escaped by the fistula, which was almost closed up.

*Remarks.*—In the first of these cases, a bruise of the perineum was followed by an acute abscess, which formed external to the urethra, and subsequently burst into it. The effusion of urine was slight and diluted with pus, and the symptoms were those of acute abscess, rather than of urinary effusion; the treatment was therefore limited to evacuation of the matter; no instrument was used until the urethra was healed, as it was thought that the passage of bougies would interfere with the adhesive process, and perhaps lay the foundation of a partial organic stricture. The subsequent occasional use of a bougie served to guard against any irregular adhesions. The third case is an example of a rare cause of perineal abscess; namely, fracture of the pelvis. I should have mentioned, that there was irregularity in the outline of the right ascending ramus; the urethra also was found to lie below and rather to the left of its proper place, under the arch of the pubis. The stricture was thought by some to be practically impermeable, but by using bougies of various forms, and patiently learning the position of every point of the stricture by repeated trials, an entrance was at last obtained. Many close strictures give us landmarks by which to discover the spot at which an instrument can enter; a granulation may be in the way, round which we must travel, or the orifice of the stricture may be oblique, and the point of the instrument may then require to be turned to one side; in this case both difficulties existed, and when a little practice made me acquainted with the position of parts, a large instrument was passed in with comparative ease. In some cases, the granulations at the stricture are tender and bleed readily, so that it is impossible to touch them and so learn their position. The second case, in its later stage, was of this character. Steady pressure for a few minutes with a large metallic bougie destroys their sensibility, and allows of the manipulation necessary to effect an entrance. In the third case, there is a point of interest connected with the cure of urinary fistula: we had here a cavity, as it were, in the centre of the fistulous track; urine always lodged in this. Where there is a direct track, or even a sinuous one of even width throughout its whole extent from the urethra to the surface, the continued use of catheters, sufficiently large to prevent any water passing out by their sides, is generally sufficient to cure the fistula. When, therefore, this plan fails, search should be made for the spot where water lodges, and such incisions made as will give it free vent. In the present case there was such loss of substance by previous disease, that we had, in addition, to apply powerful pressure in order to glue together the sides of the cavity: the pads used for this purpose were firm and large, and the bandages which kept them *in situ* were rolled round the waist and each thigh alternately; the good effect of this treatment was immediate and marked, and the ultimate happy termination of the case I attribute in a great measure to its use.

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## INTERMITTENT FEVER; THE PAROXYSMS OCCURRING ON THE SIXTH DAY.

BY DR. KIDD,

ASSISTANT PHYSICIAN TO THE COOMBE LYING-IN HOSPITAL, LECTURER ON ANATOMY IN THE "DUBLIN SCHOOL OF MEDICINE," PETER-STREET.

Intermittent fever is now, fortunately, a rare occurrence in Ireland, though some forty or fifty years ago it was, I believe, not uncommon, especially in the neighbourhood where the subject of the following case was, on the day that the disease first made its appearance, and where he probably contracted it. The rarity of the disease, and the unusual form it assumed, led to the true nature of the case not being recognized as soon as it might have been.

J. R., Esq., æt. 23, residing in the centre of this city, never abroad, nor even residing in England, except for very short visits, and that not for the last two years, strong and healthy, rose on the morning of Wednesday, the 14th December, 1853, at six A.M., to go to Celbridge, where he had a good deal of driving on an outside car, of a cold, raw morning, before getting breakfast; returned to town, and attended to business all day.

In the evening he felt ill and uncomfortable, which he attributed to fatigue; went to bed early and slept for a short time, when he awoke, hot and feverish. I found him in the morning with a dry, burning skin, pulse 144, great headach and thirst, bowels confined, and tongue slightly furred. In the evening he was better; headach almost quite gone; skin perspiring; pulse 116.

December 16th.—Slept well; pulse 84; perspiring.

December 17th.—Up, and in the drawing-room.

Monday, 19th Dec.—Felt quite well up to three o'clock, P.M., this day, when he felt a sensation of cold in the back, and creeping all over, with considerable uneasiness, which continued for three hours, notwithstanding his having gone to bed. At seven, P.M., I found him with a hot skin, severe headach, face flushed, and pulse 120.

He slept towards morning, and perspired, and, at my visit on Tuesday morning, the headach was gone, and the pulse down to 96.

In the evening he was quite free from fever; his pulse down to 60. He now complained of pain and stiffness in the neck, and cough, both of which he suffered from, as the former paroxysm was subsiding. These disappeared in the course of the next day, and he continued well, with a pulse ranging from 48, in the lying posture, to 72, when sitting up, till Saturday, the 24th December.

On Saturday morning I ordered him a grain of quinine every fourth hour; but at three o'clock in the afternoon he again felt the creeping, the general uneasiness, and the cold in the back, followed by a hot stage, with the same symptoms as before, the paroxysm terminating with perspiration, having lasted twenty-four hours. I now ordered two grains of quinine every fourth hour, which he continued to take till Wednesday, when he got four grains every fourth hour. The next paroxysm did not set in till nine o'clock on the evening of the 29th December, that is, six hours later than before; there was less excitement in the second stage, and it subsided within the twenty-four hours, without any cough, or pain in the neck.

On the 30th, he had a dose of calomel and colocynth, and an aperient draught in the morning, and on Saturday resumed the quinine in three-grain doses every third hour, till Tuesday (the periodical day), when he took twenty-one grains in the course of the day. There was no return of the fever, but at night he did not sleep quite as well as usual, having awoke about four o'clock with a sense of chilliness; but on putting on some additional clothing, slept again in about an hour, and in the morning felt well, ate his breakfast as usual; pulse, immediately after breakfast, 56.

The 8th of January was the next period, and he took through the day ten grains of quinine. There was no return of the fever, nor has there been since.

Many of our best systematic writers, in describing the varieties of intermittent fever, enumerate quotidians, tertians, quartans, quintans, septans, octans, nonans, &c., but studiously omit allusion to sextans; others mention sextans, but without referring to any cases. They are thus mentioned by Good, Copland, Elliotson, M'Cormac, &c. Watson says:—"Quintans and sextans are spoken of. . . . It is probable that when they occur, and that is very rarely, they are merely irregular quartans, postponing, perhaps, for a day or two. They never prevail epidemically. Galen describes one of these; so does Van Swieten." Galen describes a mixed tertian and quartan, in which there were two fits on the first day, one on the third, one on the fourth, one on the fifth, and two on the seventh, the second and sixth days being free; he then says he saw a quartan and quintan mixed, but does not describe it. In a note to the Sydenham Society's edition of Hippocrates, it is stated that Galen remarked, that though conversant with fevers from his youth, he never met cases of septans or nonans. Van Swieten quotes Boerhave as having seen an exquisite septenary, and states that he himself had seen a quintan arise from a quartan, but neither of them mention a sextan.

Sauvages says: "Authors mention a sextan, yet I can find no one who has observed it." And Cullen, in his Lectures, has this passage:—"Vogel is the only person who has given us an erratica sextana. Were this fact proved, I must confess it would disturb our whole doctrine; but this disturbs our theory very little, when neither Sauvages nor I myself could find any instances of it in the history of physic."

There are, I believe, two other cases of a sextan on record; at least, in the "Institutions of the Practice of Medicine," by John Baptist Burserius de Kanifeld, there are two cases referred to, one by Zeuianius (Nuovo. Font. da Cavar. Pronostic.), as having been seen by himself, and observing regular periods for a whole winter; and one by Gentilis (Comment. ad Avicen.), who also declares that he had seen the same fever.

Neither Vogel's, nor the other two works, are contained in the library of the College of Surgeons, nor Trinity College, and I have not been able to examine the cases. Avicenna himself mentions a sextan as having been described by Hippocrates; this, however, is an error.

The theory that Cullen alludes to as being disturbed by the occurrence of a sextan, is that the various forms included in the class of *febres intermittentes erraticæ* of Sauvages, viz., quintans, septans, and octans, are modifications of tertians and quartans. A quintan, he thinks, may be a tertian missing one fit; supposing the fit to be on a Monday, if the second, which will be due on Wednesday, miss, the next will be on Friday, which will be the fifth day; and in some cases obscure symptoms have, he says, been observed on the Wednesday, confirming this view. A septan may be a tertian which has missed two fits: thus the first being on Monday, the second and third will be due on Wednesday and Friday; but miss: and the fourth will be on Sunday, which is the seventh day; or it may be a quartan missing one fit. Cullen was well acquainted with the law of the relapse periods so fully explained by Dr. Graves, and indeed expressly states it, quoting it from Celsus. Octans, he says, may disturb his theory too; and as there have been too many instances of this form recorded, to allow of his passing them over as he does the sextans, he frees himself of the difficulty by questioning the accuracy of the observations. "There is nothing," he says, "in which we are more liable to be mistaken than with respect to the days. We are in danger here of mistaking the eighth for the seventh: thus if the disease appears upon the Monday, the seventh is the Sunday; but if it attacks on the Monday evening, the next attack will not be till the Sunday evening, and this may be so obscure as not to be noticed till the eighth day."

The case now recounted cannot be explained in either of these ways, because from the beginning it observed the six days' period, and was not changed to that form, from any other, by the postponing of the fits. Nor could it be produced by a tertian or quartan missing a fit, as no modification of either could produce it: the interval in a tertian is forty-eight hours, and in a quartan seventy-two hours; but in this it was 120 hours, which could not be produced by any multiplication of the others. A quartan, it is true, begins between two and five o'clock in the afternoon, as this did, but its paroxysm lasts generally but from six to eight hours; this lasted twenty-four hours. During the whole time the patient was under close observation, and there were no symptoms whatever indicative of an attempt at an intermediate paroxysm.

## PATHOLOGICAL SOCIETY MEETINGS.

*January* 28, 1854.

DR. CORRIGAN, IN THE CHAIR.

### *Exostosis of the Finger.*

**MR. HAMILTON** showed a specimen of cartilaginous exostosis of the ring finger of the left hand. The tumour was of the shape and size of a small wallnut, situated on the front of the second phalanx of the ring finger, springing from the bone by rather a broad basis. It had pushed aside the tendon of the flexor profundus, and was only covered by integument thinner than natural, and scarcely any trace of cellular tissue existed between it and the surface of the tumour, which was smooth and shining; the periosteum tightly embracing it, but, contrary to what is usually seen, very little thicker than natural. When the tumour was divided the section was of a greyish colour, and semi-transparent and friable, something less firm than cartilage. It had penetrated into the cellular tissue of the bone, nearly to the back part of the phalanx. It was readily broken off from the bone. All round the outside of the base of the tumour, for a few lines, a plate of bone rose from the cancellated tissue; it was covered by periosteum; with this exception, there was no bone in the tumour, neither spiculæ nor thin plates, as sometimes happens. It is interesting, in a practical point of view, as it shows how easily, after the division of the periosteum, the cartilaginous exostosis could be dislodged from the cancellated tissue of the bone by operation, and the whole tumour be removed without injury to the surrounding parts, from which its thin fibrous periosteal covering keeps it distinct, and, therefore, in the majority of cases, where the size of the exostosis was not great, the finger might be saved.

### *Epileptic Seizures continuing for eighteen Hours, threatening Death by Apnœa; Laryngotomy; Death; Scrofulous Tubercle in the Brain.*

**DR. GORDON** exhibited a specimen of scrofulous tubercle which existed in the left anterior lobe of the brain; it projected a little above the convex surface, and the pia mater immediately covering it was very vascular. The tumour was of a pale greenish yellow colour, of oval shape, about the size of a large hazel nut, of firm consistence, and did not appear to have any tendency to softening, but the cerebral substance immediately around it was very soft and vascular, and seemed to be falling away from the tubercle. The brain altogether was softer and paler than natural, and there was an unusual quantity of serum in the cavity of the arachnoid. There was but the one tubercle in the brain.

The lungs were greatly congested, did not contain any tubercles, but the glands in the posterior mediastinum were converted into a caseous substance, very like the cerebral tubercle.

The subject of this case was a sailor, æt. 50, who had led a very active life, and undergone much hardship and privation; in the year 1851 he was observed to become very eccentric, and this eccentricity rapidly (within a year) terminated in dementia. He was admitted into the Richmond Lunatic Asylum, in May, 1852, and was transferred to Island-bridge in January, 1853.

1853.—He was at that time quite idiotic, he spoke but seldom, and his articulation was then slow and indistinct; his gait was unsteady from partial loss of power over the entire right side of body. These symptoms were permanent, and he now became epileptic; there was at first about six weeks' interval between each epileptic seizure, latterly they became more frequent, and lasted much longer. On one occasion they lasted for upwards of twelve hours, with an intermission of only a few seconds between each fit.

Jan. 11, 1854.—He was again attacked with a succession of fits, which lasted for above eighteen hours, with scarcely any intermission between each. The entire body was convulsed, the right side less so than the opposite; at last his face and neck became congested, the veins prominent, and the surface was becoming cold; all the usual remedial means had been tried, but without any effect. I, therefore, determined to open the larynx to relieve the apnœa, from which the patient was dying; the opening was made in the crico-thyroid space without any difficulty, and as soon as the canula was introduced the epileptic fits immediately ceased. There was now a complete intermission for more than two hours, and when the fit did recur it did not continue as formerly; there were three or four more fits during the night, but there was a long intermission; he was so exhausted, however, that the system never made any attempt to rally, and he died early on the following morning.

Dr. Gordon observed, that the operation of laryngotomy was performed in the above case merely with a view to relieve the apnœa, from which the patient was suffering; and he believed that if it had been performed earlier, before the patient's strength was so much reduced, it might have been so far successful. From the partial paralysis which existed of the right side, it was conjectured that the patient was suffering from organic disease of the left side of the brain, and that the epilepsy had also the same cause; but this would have been the fifth case in which Dr. Gordon had seen death occur from the continuance of epileptic seizures, in which all the usual remedial agents had failed to check the fits, and the proximate cause of death was the intense congestion of the lungs. He thought the present, therefore, a proper opportunity for trying the effects of laryngotomy, and believed he had only to regret that the operation was not performed earlier.

### *Enlargement of the Heart.*

Dr. **Thomas Brady** exhibited a heart enormously enlarged from hypertrophy and dilatation. The aortic orifice was permanently patent.

The patient, a man about sixty years of age, of middle height and well formed, when first seen, three months before death, had been declining in health for some years, but was still able to go about and attend to any business that did not require much exertion. He had a worn, wasted, faded look, and complained chiefly of loss of flesh and strength, with rapidly-increasing debility; his breathing, permanently accelerated, became wheezing and difficult on any kind of active exertion or mental excitement, and he was often suddenly roused from sleep by suffocating attacks of difficulty of breathing. He had habitual dry cough; his ailments had been, from time to time, considerably ameliorated by medical treatment. On examination, the visible and characteristic pulsation of the arteries of the superior parts of the body, with the corresponding basic murmur, indicated the existence of regurgitant disease of the aortic orifice, while a very remarkable increase in the extent of præcordial dulness, both transversely and vertically, suggested considerable enlargement of the heart; its impulse was feeble and variable in site, from a kind of undulating movement that conveyed the impression of a feebly acting organ. The supero-anterior regions of the chest were abnormally resonant; respiration weak, and here and there sibilant. The liver could be felt projecting nearly two inches below the margin of the ribs. For the last two or three weeks he was unable to assume the recumbent posture for an instant, and the dread of immediate death was so ever present to him, that he shrieked with agony if left alone for a moment. While sitting thus propped up in bed, during a paroxysm of this kind, his head was observed to drop suddenly, and he died on the instant.

On opening the chest it was seen that even the greatly-extended area of dulness observed during life did not fully represent the great increase of size in the heart, the superior parts of the organ being overlapped by the lungs, which were emphysematous. The position in the chest was almost perpendicular, probably from the pressure of the emphysematous lungs. All its cavities contained fluid blood, the ventricles especially were greatly distended; the lungs, on the contrary, contained blood in their most dependent parts only; death from syncope. The aortic valves, tested by a stream of water, were found to be inadequate; there was much fat on the exterior of the heart; all its cavities were hypertrophied and dilated; in the left ventricle the amount of dilatation obviously exceeded in proportion the increase in thickness of its walls. The muscular tissue of the whole organ was soft and flabby, paler than natural, with a slightly yellowish hue; these characters were particularly remarkable in the walls of the left ventricle. The aortic orifice was much dilated, its valves were thickened and rigid, not deformed in figure, but somewhat diminished in size, and obviously incapable of closing the enlarged opening. The mitral and tricuspid orifices were also considerably dilated, but the valves, having undergone a corresponding increase, both in size and strength, were fully competent; the mitral was remarkably strong; the ascending portion of the aorta was largely dilated, its sinuses much enlarged, its internal surface rugose and pouchy, its walls thickened, rigid, inelastic.

The heart weighed twenty ounces; its length, from the origin of the aorta to the apex, was six inches, and its breadth, at the base, six inches and a half; the left ventricle contained easily four fluid ounces; its walls, midway between the base and apex, were seven-eighths of an inch thick; the circumference of the aorta, above the free edges of valves, was three and a half inches; the wall of the right ventricle, at its thickest part, was three-eighths of an inch in thickness.

The liver was enlarged, greatly congested, and of the *nutmeg* character.

Dr. Brady observed that, when hypertrophy of the left ventricle and aortic patency are found coexisting, the increased muscular development is usually regarded as a natural provision against the valvular disease, as, in fact, a result of the *vis medicatrix* which, when an obstruction has occurred in the course of the circulating fluid, provides a remedy by augmenting the force of the impelling power. In the meantime, the heart, long over-worked, begins to suffer from the general deprivation of the nutritive process; its muscular tissue deteriorates, becomes soft, flabby, fatty; the walls of its cavities, and in particular of the left ventricle, gradually yield to the pressure of the fluid, by which they are habitually over-distended, and in the end general dilatation is produced. Such appears to be the mechanism of production of those monstrous hearts, not unaptly designated *cor bovinum* by the earlier pathologists.

### *Scrofulous Disease of the Testis.*

Dr. **Hutton** exhibited a specimen of scrofulous disease of the testis, which he had removed from a man æt. 35 years, and wherein the differential diagnosis, previous to the operation, had presented considerable difficulty.

The patient, T. M., æt. 35, a muscular and not unhealthy-looking man, was admitted into the Richmond Hospital, on the 28th of November, 1853, on account of an enlargement of the right testicle, which presented all the signs of chronic sarcocele. It was pyriform, smooth, firm, inelastic, and of uniform consistence, except at a small spot at the lower fourth of the tumour, on its anterior and internal side, where fluctuation was perceived, and from which, when an exploratory puncture was made, about a drachm of limpid serum was obtained. The epididymis was hardened and incorporated with the testis, but presented no distinct tubercles. He complained of no pain or soreness in examining the testis; but felt some uneasiness, both here and in the loins, after long standing, to which his previous occupation had much exposed him. The integuments of the scrotum moved freely over the tumour, were of a higher colour than natural, and the veins were rather dilated. The spermatic chord was unaffected, and there were no enlarged glands in the groin or elsewhere.

From the previous history it appeared, that he had not had any venereal disease for fifteen or sixteen years, that he then had chancre, which was duly treated with mercury, and he had never had any secondary symptoms; he had been eight years married, and had healthy children. A year and a-half ago he had hæmoptysis, and some inflammation or disease of the right lung, chiefly at its upper part, from which, however, he had recovered. Six weeks previous to his admission to hospital, he first observed the enlargement of the right testis; but as it was, at first, free from pain, he paid little attention to it, until it became so large as, by its weight, to produce considerable uneasiness in his loins. On his admission into hospital, he was directed to maintain the recumbent posture, and to apply mercurial ointment to the scrotum constantly, until salivation was produced. This result took place in about twelve days, without any benefit; the testicle had increased in size; the ung. iodidii potassii was then tried, and, subsequently, pressure with adhesive straps, but with no good effect.

About the 15th of December, a protuberance appeared on the outside of the testicle, elastic, and softer than the rest of the gland, but not presenting distinct fluctuation; and the form of the tumour was becoming more globular, the scrotum was of a more dusky red colour, and the veins more dilated. The tumour now resembled more the medullary sarcoma in its *early* stage, and the operation for its removal was advised.

He left the hospital on the 20th of December, 1853, to make some arrangement, and was readmitted on the 17th of January, 1854. The testicle had, in the meantime, increased in size, and another elastic prominence was observed at the head of the epididymis.

On the 19th of January castration was performed in the following manner:—the diseased testicle was insulated by a forceps with long parallel blades (Ricord's); the sound gland, and as much of the scrotum as possible, being withdrawn from the diseased testis, an incision was made over the spermatic chord, which was surrounded with a tape, and the tumour was then removed by the flap incision made along the forceps in the interval left in its blades for the passage of the bistoury; the chord was then divided, and its vessels secured. This operation is a modification of Rima's plan, described by Malgaigne. The patient was discharged well on the 2nd of February, 1854.

*Examination of the diseased Testicle.*—The form has been already described; the weight was sixty-five drachms, being eleven times heavier than the normal average. The surfaces of the sac of the tunica vaginalis were everywhere closely adherent, except to a small extent where the drachm of serum had been evacuated. A section being made through the testes and epididymis, the cut surfaces of the former became convex from the compression of its fibrous investment. They presented a faintly red ground, *thickly* inlaid with spots and small patches of tubercular matter, none of which had been transformed either into pus or chalky matter. The protuberances noticed in the progress of the disease were scrofulous abscesses with thick fibrous coverings, and, therefore, less easily recognized as such. The spermatic chord was not diseased.

Dr. H. remarked, that the progress of this disease in the three months from its commencement, its resemblance to chronic sarcocele at first, its intractability to treatment, and the signs which it subsequently presented like those of medullary sarcoma, in the earlier stages of this disease, were remarkable. It is due to one of my colleagues, Mr. Hamilton, to say, that he considered it to be scrofulous, but he referred principally to the hæmoptysis and diseased lung, which the patient had stated that he had suffered from; and, in fact, this seemed to be the only clue to the discovery of the nature of the disease. Dupuytren, in his "Leçons Orales," admits the occasional difficulty of its diagnosis. Other writers describe the scrofulous disease of the testis as, for the most part, characterized by distinct tubercles, perceptible first in the epididymis, and subsequently in the body of the testis, and all agree in representing the disease as *extremely* chronic in its progress and duration.

Dr. Hutton exhibited an excellent drawing by Mr. Conolly, which well illustrated the peculiar morbid character of the disease described.

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# THE
# Dublin Hospital Gazette.

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## STEEVENS' HOSPITAL.

### *Case of Compound Fracture of the Leg; Supervention of Gangrene; Death; with Clinical Observations.*

BY SAMUEL G. WILMOT, M.D.,

SURGEON TO THE HOSPITAL.

John Donohoe, æt. 15, a delicate-looking boy, was admitted into No. 1 Ward, on Tuesday, the 31st of January, 1854, with a compound fracture of the left leg, at its lower third.

He stated that he met with the accident some hours previously, his leg having been caught in the spokes of a car-wheel, while in motion.

The wound in the skin was situated on the outer and a little to the back part of the leg; it was very small, and the upper fragment of the fibula protruded through it to the extent of nearly half an inch; the lower lip of the wound was wedged in between the bones. The tibia was broken nearly on a line with the fracture in the fibula. The limb was tense and swollen. The boy's countenance was anxious, pulse quick, skin hot.

The protruded bone was readily reduced by passing a probe-pointed bistoury beneath the lower lip of the wound in the skin, and thus dilating it, the sharp extremity being afterwards clipped off with a forceps. The limb was placed on its back in a box-splint, and kept fairly *in situ* by appropriate pads, bandages being dispensed with. He was ordered thirty drops of tincture of opium; a fomentation of decoction of poppy heads and camphorated spirits (℥ i. ad lb. i.) to be applied to the limb.

Wednesday, February 1.—Slept badly; pulse 125, full; skin hot, tongue moist, swelling and tension of limb increased; vesications have formed over the dorsum of foot and lower part of leg. Ordered the following pill every sixth hour:—

℞ Calomelanos, gr. i.
Pulv. Jacobi veri, gr. ii.
Ext. opii aquosi, gr. ss. M. Ft. pil.

Thursday, 2nd.—Still sleeps badly; fever higher; tongue coated with a yellowish fur; bowels moved; tension of limb somewhat reduced; wound looks sloughy.

Quantity of opium in the pills to be increased.

Friday, 3rd.—A great change for the worse has taken place. Is very restless, and was delirious during the night. Pulse 130, jerking, having lost its strength. He complains of severe pain. Swelling and tension of leg are greatly augmented, and the integuments present a mottled green and yellow hue, such as is observed in an ecchymosed part after the lapse of a few days; the temperature of the part, however, is well maintained. Effusion has taken place into the knee-joint, and there is some swelling of the thigh above it.

Two or three incisions were now made wherever the tension appeared greatest. To have wine, and to be kept well under the influence of opium; a light poultice to be applied to the leg.

Saturday, 4th, nine o'clock, A.M.—Gangrene has set in. The foot is pale, and its temperature, as well as that of the leg, is considerably reduced. The skin, for a considerable extent around the wound, is completely sphacelated, and that of the lower third of the leg, just about the seat of fracture, presents a livid hue. The effusion into the knee-joint has increased, and the swelling and infiltration of the thigh have considerably extended. The patient is drowsy, but does not sleep; does not now complain of pain; pulse 144, very weak and small; tongue dry, and brown.

I saw the patient at this time, in consultation with Mr. Cusack and Mr. Colles.

Three long incisions were made into the leg, each freely dividing the fascia, by which a quantity of air and brownish serum were extricated; they hardly bled, and were barely felt by the patient.

To have as much wine and brandy as he can take.

Five o'clock, P.M.—Saw the case again with Mr. Cusack. The gangrene has greatly increased. The limb, from foot to knee, is quite cold, and a large livid patch is observable on the outside of leg, just below the knee. There is no crepitation, except to a very slight extent, immediately about the fracture. The joint has become quite tense from the effusion into the synovial membrane, and the infiltration and swelling of the thigh have run up to the groin, being particularly observable on the outer and inner side of the limb. The muscles have bulged through the incisions made in the morning, and present a greenish hue. He has taken a fair share of wine and brandy. Pulse 150, very feeble; the surface is covered with a clammy sweat.

One long incision was made on back of leg.

Sunday, 5th.—He died this morning at 8 o'clock. Since last report the swelling and infiltration of thigh rapidly spread, having extended a considerable distance above Poupart's ligament; the entire leg, up to the knee, became perfectly gangrenous. For some hours previous to death he was delirious, and the pulse became intermittent and too rapid to be counted.

*Examination of limb three hours after death.*—The fibula was fractured transversely. The tibia presented a fracture partially transverse and oblique, the latter portion running from above and without, downwards and inwards. The muscles were not much injured, but about the seat of fracture a good deal of blood was extravasated. On puncturing the joint, a large quantity of brown fluid and air gushed out, and the cellular tissue of the thigh was everywhere infiltrated with serum of a deep yellow colour. A very slight crepitation was perceptible on pressure in the groin.

*Observations.*—Compound fracture may be produced in two ways: either the violence may be so applied as at the same time to break the bone and tear the skin; or the force may at first merely break the bone; then the continuance of the same force, or another, applied in a different direction, may drive the upper fragment through the skin. In the case before us, the upper fragment of the fibula protruded through the integuments. Now, experience teaches us, that where the bone protrudes, making a small punctured wound, the case frequently takes a much more unfavourable course than where the skin has been extensively wounded; gangrene, fascial inflammation, and abscesses, are far more apt to occur. I have frequently observed this to be the case; and it is the result of Mr. Cusack's vast experience, that where the fibula, in particular, protrudes, making a small punctured wound, the case is most prone to run an unfavourable course. You see, then, that so far from measuring, as you would be apt to do, the evil consequences likely to result from a compound fracture by the degree of the injury done to the soft parts; on the contrary, within certain limits, a small punctured wound will generally lead to worse results than where the skin is extensively lacerated.

The first step you have to take, when called to a case of compound fracture, is, of course, to endeavour to reduce the bones. When the upper fragment projects, the skin affords the first impediment to the reduction; the more you pull, the more you draw in the skin between the bones. There is but one means of overcoming this obstacle. Pass a probe-pointed bistoury beneath the lower lip of the wound in the skin, and divide it in the manner described in the case; this will at once liberate the bone, and allow it to slip back, and if perfect coaptation cannot be otherwise procured, a portion of the bone may afterwards be clipped off with a forceps. The bones being properly adjusted, the limb is to be placed on its side or back, according to the situation and the direction of the fracture; and now comes the question as to the advisability of applying bandages. There is some difference of opinion upon this point. Now, bandaging may be advantageous or injurious, just according to the particular period at which it may be done. If you see the case before swelling takes place, always apply bandages; they will not only keep down swelling, but will help to maintain the bones *in situ*, and will controul the spasms of the muscles, which are so frequent an accompaniment both of simple and compound fractures. If much swelling, however, have taken place, bandaging must not be attempted; it will surely increase the tumefaction, excite vesication of the skin, cause pain and fever, and if done with any degree of tightness, may lead to gangrene. As to the treatment to be pursued in compound fracture, all you can do is to watch the symptoms as they arise, marking their character, and meeting them accordingly. During the early period of the case, you will have to deal with symptomatic inflammatory fever, which sometimes runs very high; then the type alters, and in cases attended with much suppuration, hectic fever becomes gradually established. One of the most troublesome symptoms, at this stage, is often diarrhœa, which sometimes proves quite uncontrollable by the most powerful astringents. The chief point, however, to attend to, in the course of compound fracture, is the formation of abscesses. The patient is going on satisfactorily; his pulse is tranquil, his skin cool; he sleeps well, neither does he experience any pain—when, suddenly, he is seized with a rigor, high fever is lit up, and he complains of severe pain. This change implies the formation of matter in some part of the limb; examine it carefully, and if you detect an abscess, open it at once. Sometimes the suppuration presents itself in the form of a succession of small abscesses; but, occasionally, a large collection of matter forms beneath the fascia, and unless this be let out by an early and free opening, it may burrow until it destroys the cellular tissue between the muscles to a serious extent.

Now, with respect to the performance of amputation in compound fracture, it may be had recourse to at three different periods: within twenty-four hours from the receipt of the injury—primary amputation; and after this period, principally for gangrene; and at a still more remote period, for hectic fever—secondary amputation.

As regards primary amputation, we should be very slow in having recourse to it. It is wonderful what powers of repair nature occasionally exhibits, particularly in young persons; so that unless the amount of injury be obviously irreparable, it is our duty to endeavour to preserve the limb. In those cases, however, in which primary amputation is unavoidable, we must take care to hit off one particular moment for its performance—when reaction is fairly established, but before it passes into fever. In cases of severe compound fractures of the limbs, particularly those inflicted by sudden and powerful violence, the individual remains in a state of collapse for several hours afterwards, and if amputation be performed under such circumstances, a fatal result may accrue. You must wait until reaction sets in; still, if you wait until it has glided into fever, you operate under a great disadvantage; your case will be very apt to have an unfavourable issue.

One of the greatest questions, however, in practical surgery, is the period at which amputation should be performed in compound fracture, when gangrene supervenes. For a long time there have existed two parties in the profession which entertain exactly opposite views upon this point. One contends that you should not operate until the gangrene has ceased to spread, and that the line of demarcation has been fairly established. This party is headed by the celebrated Pott, and we find amongst its ranks, besides many eminent surgeons, the late Mr. Colles (surgeon to this hospital), than whom there was no higher authority on a point of practice. He thus emphatically expressed himself in his lectures:—"The patient has no chance of surviving amputation when the gangrene is spreading, and the fever high, and before the red line of demarcation has formed." The other party maintain that the operation may be performed while the gangrene is spreading. It is headed by the distinguished Larrey, and we find Guthrie, and many other surgeons of repute, following on the same side. It is worthy of remark, however, that hitherto the advocates for amputating in spreading gangrene have been chiefly military surgeons; and I allude to this fact, because it is well known that conclusions drawn from the practice of military surgery are not always applicable to civil. Here, then, are two exactly dissimilar opinions on a point of the highest practical importance; and how are we to reconcile them? While every surgeon must admit the far greater probability of success attending amputation when performed after the gangrene has ceased to spread, there are few, I believe, at the present day, who would refrain from operating merely because the "red line" had not appeared; in many cases, were we to wait for this event, our expectations would never be realised. If, within a certain period, no disposition to an arrest of the gangrene appear, we ought to operate while the patient is strong enough to bear it. Should, however, the gangrene spread quickly, accompanied by great prostration of strength, delirium, and rapid pulse, the operation is inadmissible. If we are to afford a chance of recovery, in this disease, by amputation, we must be most particular in making a proper selection of the cases in which to operate. We do not operate indiscriminately in cases of diseased knee-joint, nor cancer of the breast; neither should we do so in spreading gangrene. Students are very apt to think, and even to argue, that in a desperate case, where death is inevitable if the disease should extend beyond a certain limit, it is justifiable to operate. This opinion, however, is most erroneous. We have no right to bring operative surgery into disrepute by having recourse to it, unless there be a fair chance of its being attended with success.

In the case the object of the present remarks, amputation was out of the question; the gangrene spread too rapidly to afford an available moment at which it could be performed with the smallest prospect of success. In fact, the gangrene was hardly apparent on the lower part of the leg when there was effusion into the knee-joint, and considerable swelling and infiltration of the thigh; the patient, also, had been delirious, the pulse was over 140, and the vital powers were prostrated. Had amputation been performed under such circumstances, it is not so much that it would have proved unsuccessful, as that it would undoubtedly have expedited the fatal termination.

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## RICHMOND HOSPITAL.

### *Fistula in Ano.*

BY JOHN HAMILTON,

SURGEON TO THE HOSPITAL.

### Lecture II.

W. Fry, aged 38, complains that he has been annoyed for some months past with an itching sensation at the anus. Six weeks since he felt a throbbing pain at the lower end of the rectum, near the coccyx, and soon after found a tender swelling near the verge of the rectum. He suffered great pain at stool, when he sat down, or when he coughed. The pain appears to have been unusually severe; a fortnight ago the swelling burst, and matter was discharged. The first opening healed up, and a second formed, which continues open. It is on the right side of the anus, near the posterior part. Both fæcal matter and air come through it. He suffers a good deal of pain.

A probe can be passed through the fistula into the rectum; its point is felt a little above the internal sphincter. The external opening is about one-third of an inch from the extremity of the rectum.

He is otherwise healthy, and has a healthy aspect; but he has been a hard drinker. The only cause he can assign for the present complaint is, a very costive state of the bowels.

He was ordered a little grey powder at night and a castor oil draught in the morning. The bowels were well moved.

Feb. 19th.—Mr. Hamilton passed a slightly curved director through the fistulous opening, and brought its point out through the anus. By a sharp bistoury, passed along the director, the parts between the two openings, including the sphincter, were divided; a piece of dry lint was placed between the lips of the incision.

The bowels were afterwards kept gently open by mild laxatives, and the wound was dressed from the bottom with dry lint.

March 1st.—It is now the twelfth day since the operation; the wound is so nearly well that he is discharged.

If an abscess by the side of the anus, as I have described in the previous lecture, is left to itself, after more or less suffering, it breaks, discharges its contents, and the patient experiences much relief. But the abscess generally will not close; the repeated action of the sphincter, in passing fæces and wind, prevents it by breaking up the adhesions between its sides as fast as they are formed, and it becomes a *fistula in ano*, that is, a small, narrow passage communicating with a suppurating cavity at the side of the gut. Perhaps even a more powerful cause is, the extent of the cavity compared to the small opening, giving such imperfect exit to its contents, and constantly keeping it more or less distended.

This is the simplest form of blind fistula. The case of the patient is not long; the fistula, which at first discharged freely, gradually ceases to do so; then pain is felt, with a return of swelling and general disturbance; this is again relieved by the abscess bursting through the old fistula, or making a new opening. In short, the matter being secreted faster than the small fistula can give exit to it, accumulates, and seeking some other outlet, burrows in the loose cellular tissue under the skin at the side of the anus, sometimes backwards towards the coccyx, sometimes forwards to the perineum and scrotum, and sometimes outwards to the buttock, and downwards to the thigh; you will, in fact, in old cases, be surprised at the number and extent of these fistulæ, and their distance from the anus. When there is only one fistula, and in rather an early stage, you will perceive but little redness or fullness at the side of the anus, but at one spot a little raised, red, papilla; this is the opening of the fistula, and is sometimes so small as with difficulty to be discovered, and scarcely to admit the aid of the probe. In old cases you will see many of these with a puckered appearance of the surface, in some parts red, in others whitish and glossy, with induration or callosity. In these old and extensive fistulæ, when you introduce a probe into one of the leading sinuses you will be almost alarmed at the depth it goes up along the side of the rectum, the walls of which are bared, so that when you pass your finger through the anus you can readily feel the probe through the thinned wall of the bowel, which is sometimes nearly isolated all round; the very loose structure of the cellular tissue here leading to this.

Now if the abscess, instead of breaking externally, does so internally, the opening will in general be found only a short distance within the anus, just above the internal sphincter; and the patient, after the breaking of the abscess, will be relieved for a time from the disagreeable sensations he previously felt, but not for so long a period as in the former case; wind, the secretions of the rectum, or some liquid, or small portions of solid fæcal matter get through the opening into the cavity of the abscess, and keep up pain, irritation, and suppuration. There is in this case more irritation of the rectum, and the patient has more frequent calls to stool, and not perfect relief after a motion, which will be observed to contain pus, and often blood. These are troublesome cases, and when the abscess is small, often obscure.

A medical friend of mine consulted me for uneasiness and weight about the anus; this uneasiness almost amounting to pain when he passed a motion; and he had observed a slight moisture. He was out of health, irritable, and low-spirited. There was no redness, but at the right side of the anus there was deep-seated hardness, which was very tender, causing him to wince on pressure. When the gorget speculum was introduced, a small papilla was seen just within the anus, at the same side, from which matter oozed; through this the point of a hooked probe could be passed and felt under the skin externally.

In either of the forms now described, if the disease is left to itself, it rarely ever gets well; but, on the contrary, as I have already said, fresh abscesses form, the matter burrows in every direction, and opens in different places, leaving fresh fistulæ, for many of the openings do not close. If in the beginning you have a blind external fistula opening by the side of the anus, the sinus or cavity of the abscess, sooner or later, after running up the side of the rectum, opens into it, and thus you have a "complete *fistula in ano.*" So when you already have a blind internal fistula, with an opening just above the internal sphincter, it is usually not long before this works its way out by the side of the anus, and you have a complete fistula formed. This is known by not only matter, but air, coming through the fistula, when the patient passes fæces or wind; fæcal matter, however, rarely comes through, and even in the most complete and direct fistula the patient is often quite unconscious of the passage of wind. It is not always easy, by examination, to satisfy yourself whether the fistula is complete. You pass your probe into the fistula, up by the side of the rectum, and generally much above the internal fistula; you can feel the probe through the isolated wall of the rectum, but you can detect no opening; try just above the internal sphincter, about an inch from the anus, and you will probably at length hit off the opening, and the probe will pass into the bowel. As the discovery of the opening renders the operation more easy and more effectual, we should not hastily abandon our efforts to find it. M. Ribes has, perhaps, studied this subject with the greatest care. He examined seventy-five bodies, and found the internal orifice to be "most commonly a little above the place where the union is effected between the membrane lining the rectum and the external skin, sometimes, also, a little higher up; but the opening is never situated above five or six lines high," at least in any one of the seventy-five dead subjects in which he found the fistula. He says, that "the opening itself appeared as if ragged or torn; in the greater number it was soft, but hard and callous in a few."

The precise course run by the fistulæ was a little variable; in many cases he had seen them, after having taken their origin in the interior of the rectum, descend between its mucous membrane and the internal sphincter muscle. When they have arrived at the inferior part of this muscle, they take a detour and pass between the external sphincter and the skin, and proceed to form an opening in the neighbourhood of the margin of the anus. In many other cases the fistula passed through the fibres of the internal sphincter muscle, descended immediately between it and the longitudinal fleshy fibres of the rectum, bore down on the superior face of the external sphincter, passed through its fibres, and then proceeded to ulcerate its way through the skin, at a greater or less distance from the inferior extremity of the rectum. But in a sufficiently large number of the subjects the parts through which the fistulæ made their way were so much disorganized and confounded together, that it became impossible to determine their precise course. In all these subjects, the course of the fistula was lined by a membrane, extremely thin, smooth, and uniform in its texture, and seemingly destitute of any villosity. He adds an opinion, in which my experience will not allow me to coincide. "The result of these researches has convinced me, that in nearly all cases the fistula is affected in a pile, and sometimes that its passage is determined by some vein of the hemorrhoidal plexus."

In making an examination, therefore, for the internal orifice, we might almost detect it with our eyes, by separating the sides of the anus sufficiently, but if not, while exploring with a probe we should not go too high. It should also be borne in mind, that from the looseness of the textures by the side of the rectum, a little force will drive the point of the probe readily on, and while following a false route we might think we were still in the fistulæ. You will find, too, that you will often have to curve the probe considerably, the straight probe not following so readily the tortuous course of the fistula. Cases present themselves where the external opening is at some distance from the anus, the fistulæ burrowing horizontally under the skin, towards the rectum. Slitting up this fistulous passage materially assists in hitting off the internal opening, which we had previously failed in finding; the probe being thus allowed a greater freedom of movement.

The causes of *fistula in ano* are the same as those of anal abscesses. A similar rule as to age applies to both. The oldest sufferer from fistula that I have seen was 75, and I have operated on a child of three years. Mr. Syme mentions, that he has performed the operation on infants some months old.

It is a curious thing how long a fistula will sometimes remain, without becoming either much better or much worse. I have known one to continue little changed during five years.

A woman of the name of Ellen Reilly, 37 years of age, was admitted into No. 13 Ward, May, 1853. She had two complete fistulæ, one on each side of the anus. The one on the left side was of only two weeks' standing, but the right was of nine years, and had remained during that long period nearly stationary, except that, at the menstrual periods, it always became inflamed and painful, but ceased to be so when the menses were over. More generally a fistula is not so stationary; after a time it gets more extensive; from being on one side at first it will end by engaging both; near the anus, in the beginning, it will, as I have side, finally extend higher up, denuding the bowel from the adjacent structures, spreading round the anus externally to all the near parts, which are riddled with fistulous openings. Though the discharge is little from each, yet the sum of all is large, so that the patient's clothes are soiled by a profuse flow of dirty yellow pus, often tinged with blood. Even a small quantity of discharge is troublesome; besides the linen being rendered foul, the feel of constant moisture is most disagreeable; and when the fistula becomes irritated and inflamed, the nature of the matter becomes changed into a thin, excoriating fluid, scalding the parts over which it runs. Except at these periods of inflammation, when the pain is severe, the suffering from a fistula is not considerable: at times scarcely felt; at others sore, particularly at stool; but at most times the patient is sensible of a dull, heavy, throbbing feel at the anus. But, however small or insignificant a fistula may appear, the general health suffers, the person is easily fatigued, sweats on the least exertion, is subject to chills, and the complexion is sallow.

In the treatment of fistula you will first have to consider whether the patient has any serious internal disease, because in the latter stages of phthisis abscess by the side of the anus ending in fistula is not uncommon. Now the existence of the fistula may be of use as a derivative in delaying the fatal progress of the disease, and, therefore, no good surgeon would think of operating, unless when the pain and annoyance are unusually great.

In other diseases of the lungs, heart, liver, or womb, or when there is caries of the sacrum, we must refrain from cutting the patient. In the last case, till the carious bone takes on a healthy action, or where there is a piece of loose dead bone, till it is removed, operative proceedings are useless. Where none of these contra-indications exist, the disease being a purely local affection, we resort to the operation, which is generally the only means of cure; it will vary according to the kind of fistula we have to deal with.

When the fistula is simple and complete, the internal opening readily found, and not a great distance of parts between this and the external opening, the operation is very easy. Pass a director through the fistula into the rectum, and where the internal aperture is near the anus, it can be passed out through it, by gently curving the director; along the director a probe-pointed bistoury, which divides the parts between the two openings, including the sphincters. A piece of lint introduced to the bottom of the wound soon stops the bleeding; it should not be removed till forty-eight hours. The wound may afterwards be dressed with lint, and when granulating be touched with a solution of the nitrate of silver, a drachm to the ounce of distilled water; and, if indolent, the lint may be wet with a lotion of the sulphate of zinc, a grain to the ounce of water, with the addition of a little spirit of wine. It usually takes three weeks or a month to heal completely. During this time the bowels should be kept open by the daily use of the sulphur and cream of tartar electuary, with an occasional mild aperient, infusion of senna with epsom salts and manna, the compound infusion of roses with the same, or castor oil.

I have already alluded to the case where, though the internal opening is near the anus, yet that a cavity exists much higher up, denuding the walls of the rectum. I believe it is not necessary to alter the operation on this account; the case is slower in getting well after the operation, but subsequent to the division of the parts below the internal opening, the walls of the cavity above become altered, healthy granulations cover their surfaces, which coalesce, contract, and the cavity becomes obliterated. It is very important to be decided on this point, because the division of the rectum high up is so dangerous, the vessels, both veins and arteries, being large, and the bleeding from them is consequently copious and hard to stop. Larrey, Sabatier, Ribes, Brodie, and Syme are agreed in this opinion.

The operation is much more serious where a large thickness of parts exists between the two openings. You must expect smart bleeding, the veins at the lower end of the rectum are naturally large, and from the long-continued diseased action the arteries become so too. When the finger is introduced into the rectum, the diseased side feels quite hot, and a large artery can often be perceived pulsating strongly there. Should this come across the edge of the knife and be divided, it will of course bleed furiously, and, as the part is solid and condensed by inflammation, the bleeding vessel does not retract, nor can it usually be drawn out by the tenaculum and ligatured. No one should despise this danger of hæmorrhage.

Patrick Kelly, ætat. 35, admitted into the Richmond Hospital, May 14, 1847, a carpenter, slight and small, but not sickly looking; never drank hard, but was always troubled with irregularity of bowels, sometimes constipated, at others too free.

Five years ago he had a "bloody flux," and a small lump appeared at the anus like a pile; he cut it off with a razor, it bled a little, and the anus afterwards felt tender; and, though the lump was gone, a small opening remained, discharging a clear fluid, and occasionally a little wind.

Seven months ago another lump formed, throbbing and painful; it broke and discharged matter. Since then there have been no fresh gatherings, but a good deal of yellowish discharge, particularly during the last six weeks.

No pain except during stool, and for a short time after, particularly during the action of purgative medicine, or a diarrhœa; he is easily fatigued, and is subject to chills, but he has no sign of any other disease.

Round the anus there is considerable induration, and several fistulæ, one on each side, and one a little distance from the anus, in the perineum. They all lead up the side of the anus for three inches and more, the rectum, for between two and three inches, being completely separated from the adjacent parts; some of the fistulæ extend above that. There is an internal opening, two inches above the anus, capable of admitting a goose quill. Altogether, it was rather a formidable case of fistula, and one in which I thought it best to perform the operation in two times.

15th.—I operated on the left side; the metallic grooved speculum was passed up the gut, and a director from the fistulous opening outside, rather high up against the rectum, but not through any internal opening, which I was unable to find. A sharp-pointed bistoury was passed along the director through the rectum, till its point rested against the speculum; the parts below, including the sphincters, were then divided. There was little hæmorrhage.

22nd.—The operated side is doing well, and he seems fit to have the second operation performed. It was much more serious than the other; the parts to be divided were very thick, and the fistulous opening high up. I got the director through this opening into the bowel, and operated as before. There was most severe hæmorrhage, which I could not arrest either with lint or sponge, and continued pressure with my finger; nor could Mr. Hutton or myself succeed in taking up the bleeding vessels, the parts tearing away. Fortunately the man fainted when the bleeding stopped, and before reaction returned a pledget of lint was firmly fixed in the wound. In spite of this the bleeding afterwards slightly recurred, but another pledget completely restrained it.

Think of the difficulty here of stopping the bleeding, even with the valuable assistance of my friend Mr. Hutton, and the serious danger of hæmorrhage will be apparent. If you are more successful, and succeed by means of well applied pledgets of lint, stay with your patient some time, and when you leave, be sure that the lint is well secured by a bandage. The following case shows the importance of this precaution:—

A woman, æt. 38, had double fistulæ, the first was operated on, and a week after the second. The surgeon had to divide a great thickness of parts, the hæmorrhage was very smart, and continued for between two and three hours before it was stopped by the insertion of a piece of lint. Two hours afterwards she got up to make water, the piece of lint, which had not been secured by a bandage, became dislodged, a great gush of blood took place, and she fainted. Sir Philip Crampton operated on a case in the Royal Infirmary, Phœnix-park, where the parts divided were very thick, and the hæmorrhage so excessive that the resident military surgeon told me the man was very nearly carried off by it. No vessel could be taken up by the ligature; lint, both plain and steeped in turpentine, failed; and it was only after great loss that the application of the solid nitrate of silver gave it a check. I recollect assisting at another case, where the fistula was divided very high up; there was sudden and copious arterial hæmorrhage, which nothing stopped till the man fainted. Under the two circumstances, therefore, of a fistula high up, or a considerable thickness of parts to be cut through, we should be prepared for bleeding. The probability of this serious accident should make us pause before we meddle with old cases, where the fistulæ are very deep or very numerous, and a large breadth of parts implicated; particularly in those just passed the middle period of life, whose constitutions have got accustomed to the drain, and who do not bear the shock of a severe operation well. The fæcal matter, too, passing over the open vessels of the large surface of the incision, must be more or less injurious from absorption, or by causing phlebitis.

This is not imaginary; I have seen a patient operated on, in whom the fistulæ were most numerous and extensive, and who lost his life by purulent inflammation of the veins.

In blind internal fistula it is best to make it a complete fistula, by making an opening at the side of the anus, in the hard tender red part, which, in such cases, usually points out the seat of the abscess communicating with the internal opening, and then operate as for complete fistula. When the fistula has been very small, and any indications of its existence at the side of the anus not well marked, and the internal opening close to the anus, I have passed a probe, curved like a hook, through the opening, till its point could be felt through the skin, so that I could readily cut down in it, and, afterwards, rapidly completed the remaining steps of the operation.

In blind external fistula the operation is simple enough. A probe bistoury, with the front of the end a little sharp and projecting, is passed up the fistula till its point presses against the wall of the rectum, the nail of the forefinger in the rectum scratches against the end of the bistoury till it pierces the bowel, and then is drawn downwards, with the finger on its end, dividing the sphincter and all the parts below it.

When there is double fistula, it is best to operate on one side first, and a week or ten days after on the other; in this way incontinence of fæces is avoided, which, though temporary, is a very distressing and disgusting affection. Where several fistulæ lead into one, after the division of the main fistula, the others should be laid open into it. This is most essential; many of the cases which come to the hospital, when operations have been already inffectually performed, owe their want of success to its having been neglected.

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## MERCER'S HOSPITAL.

### *Case of Popliteal Aneurism cured by Compression.*

BY WM. JAMESON, M.D., F.R.C.S.I.,

ONE OF THE SURGEONS TO THE HOSPITAL.

The cure of aneurism by compression, or by the "Dublin Method," as it has been termed, is now so fully established, and admitted by the majority of surgeons in this country to be the best mode of treating all such cases as will admit of its application, that a case brought forward in support of it may appear unnecessary and uncalled for; but as there remain some eminent men, who are still sceptical, at the other side of the water, and who are disposed to advocate and prefer the hazardous operation of tying the artery, to this more simple and unostentatious method of treatment—and the case I am about to record having been considered a most unpromising one for trial in this way—it may not be uninteresting to them, not only by adding another successful case to the long list already published as having been treated in this city and elsewhere by this method, but as also well calculated to impress the surgeon's mind about to adopt it with some degree of confidence as to the probable result.

John Kelly, a labourer, residing in Whitefriar-street in this city, æt. 45, rather muscular, and about the middle stature, formerly of intemperate habits, but who had not drank for seven months past, was admitted into Mercer's Hospital on the morning of Thursday, the 9th of February last, under my care, for an aneurism, about the size of a large turkey egg, occupying the left popliteal space, of which he gave the following account:—

On the Saturday week previous (Jan. 28th), thirteen days before admission, whilst engaged in lifting a very heavy weight, assisted by two other men, he felt something suddenly snap or give way in his left ham, but continued to work for the remainder of the day. On the following day (Sunday) he noticed that the part was swollen, painful, and pulsating, and he had not been able to straighten the leg, nor work, up to the period of his admission, as all attempts to move the limb caused an increase of pain, which was principally referred to the instep and calf of the leg, and induced him to seek advice at the hospital.

The limb was semiflexed and slightly swelled, the veins somewhat turgid, the ham completely filled up by this large pulsating tumour, which projected beyond the ham-string muscles behind, and by its transverse pressure pushed them laterally aside, so as to add considerably to the breadth of this space; a large nerve was felt expanded on its internal and posterior part.

The pulsation of the tumour contrasted strangely with that of the heart and radial artery, as the former was most violent and strong in its action, as if the artery had an independent action of its own, while that of the heart and radial artery was very feeble and easily compressed. The current through the tumour seemed to have merely the thickness of the integuments interposed between the blood and the fingers, whilst the integuments covering it were unchanged in colour. By arresting the current of blood through the femoral artery, the tumour could be completely emptied.

Fearing, if any further delay was incurred, this aneurism would become diffuse (a result which did not appear far distant), I determined to try the effects of compression at once. So I immediately had him placed in bed, his limbs semiflexed, resting on a large pillow under the hams, and at a quarter before twelve o'clock noon, applied the ring tourniquet, making the point of pressure fall on the femoral artery immediately below Poupart's ligament. This completely controlled the current through the tumour, but the instrument did not fit him well, and he was only able to bear the pressure for an hour. It was, therefore, removed, and an attempt made to compress the artery by a clamp as it passes through Hunter's canal; but although we could controul the current with the fingers in this situation, we could not effectually do so with this instrument, as the muscles at either side appeared to take the pressure off the vessel, and its application in that part produced considerable increase of turgescence of the superficial veins of the limb and pain in the leg. At twenty minutes past one, P.M., the ring instrument was again applied on the groin, and the circulation through the tumour arrested; at half-past two, P.M., the pulsation had returned, and at a quarter to three the apparatus was again adjusted.

He continued during the whole day extremely dissatisfied, discontented, and restless, constantly shifting himself and the instrument, and I found it extremely difficult (impossible) to convince him of his dangerous position; even chloroform, which I attempted to administer occasionally, I could not get him to inhale; so that the vessel was only compressed for short intervals at a time, during the greater part of the day, partly, as I say, owing to the instrument not fitting well, and partly to the restlessness of the patient. At ten, P.M., I gave him forty drops of tinct. opii, and adjusted the instrument for the night.

Friday morning, ten, A.M.—Slept during the night, and bore the pressure of the instrument well. The pulsation in the tumour has returned, owing to the shifting of the instrument. Dr. Bellingham having kindly lent me a "Read's compressor,"* with his assistance we applied it in Scarpa's space, but this caused so much uneasiness, that I was obliged to remove it in ten minutes, and ordered him a brisk cathartic. We now commenced finger pressure along the course of the artery, which was unremittingly kept up by relays of pupils, who kindly undertook charge of him, till half-past two, P.M., when the "compressor" was reapplied, and left undisturbed till four o'clock; it was then readjusted, and the tumour began to feel somewhat smaller and harder; and the compression was continued during the night.

Saturday, ten, A.M.—Passed a very quiet night, and does not complain of any inconvenience from the pressure; the tumour pulsates, but not near so strong. Eleven o'clock, P.M.—Unceasing pressure has been kept up during the entire day. The tumour feels much smaller, and more solid.

Sunday, ten, A.M.—Feeble pulsation can be felt through the tumour. Compression could not be steadily kept up during this day, in consequence of the man's irritability and impatience. To have an anodyne at night.

Monday, ten, A.M.—Pulsation has returned, and the compressor was readjusted. At two, P.M., there was slight pulsation in the tumour; and again, at five, P.M., after which the pulsation did not return for twelve hours.

Tuesday, ten, A.M.—Had some pain during the night, referred to the knee and ancle; a large vessel (anastomotica magna) pulsates strongly over the inner condyle of the femur, another along the head of the fibula, and a tolerably large one on the back part of the tumour; these may account for the accession of pain. The compressor was adjusted three times during the day, in consequence of the pad slipping off the vessel, followed by feeble pulsation in the tumour.

Wednesday.—Passed a good night; a slight thrill was noticed through the tumour; the instrument was adjusted at ten, A.M., and again at six, P.M. Pulsation did not subsequently return, and the compressor was finally removed on Friday morning, the eighth day after admission, the tumour being firm, perfectly solid, about the size of a pullet's egg, and free from all pulsation. But, to guard against any return of it, I compressed the artery in Hunter's canal with the ring instrument (the one first used), as slight excoriation was occasioned in the groin by the long-continued pressure there. This instrument I removed on the following day, the patient being considered cured, and only now requiring the superficial excoriation in the groin to cicatrize before leaving the hospital, which he was enabled to do on the 6th of March, possessing full power of his leg, the tumour being then very hard, and greatly reduced in size.

The above case, I consider, speaks volumes in favour of compression, when we consider its very unpromising character, arising from the great rapidity of its growth, having attained its vast size in the course of thirteen days—its contents being so very fluid, the thinness of its coverings, and the strong and bounding action of its walls, threatening every moment to give way and become diffused: these circumstances, I say, rendered the propriety of delaying the operation for tying the artery very doubtful. However, I was determined to give him the chance, and the result, I must confess, has far exceeded my most sanguine expectations. The patient, also, could not be prevailed on to cooperate with me in my exertions, as he was most apathetic to his condition; and, although he submitted to *uninterrupted pressure* of the pad in one spot (the groin), from Saturday, at a quarter-past two, P.M., till the Friday morning following, still, that pressure was not always applied on the vessel, in consequence of his twisting himself in the apparatus, on many occasions nearly turning over on his face, and frequently lying on his side, thus allowing the vessel to glide from under the tourniquet; which proves, in the most convincing manner, the justness and accuracy of the following remarks of Dr. Bellingham:—"The pressure should not be so great as to interrupt the circulation in the artery at the point compressed; an essential agent in the cure being, that a current of blood should pass through the sac." The principal annoyance which this man complained of from the instrument was not referred to the groin so much as the parts pressed upon by it behind; although it was fully padded and well cushioned.

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* In Dr. Bellingham's book on "Aneurism treated by Compression," p. 88, the instrument is described thus:—"This instrument, as constructed by Messrs. Read, surgical instrument makers, of Parliament-street, in this city, consists of a padded band, which encircles the pelvis, and buckles in front, of a semicircle of steel, which comes off from the back of this band (into which it is so fitted, that it can be adapted to either side), and terminates in a ball and ring, with a screw and pad attached. The ball and ring, through the former of which the screw connected with the pad passes, permit of the latter being pointed in any direction the surgeon may wish; when the pad has been brought immediately over the artery, it is fixed by turning a thumb-screw, which causes the ring to hold firmly the screw within it. Where the ball and ring join the semicircle of steel, this is what is termed "a quadrant," which permits of their being moved either upwards or downwards, so as to vary somewhat the point of pressure, and, by turning another screw, they are then secured.

The constitutional treatment consisted merely in one dose of purgative medicine; anodynes at night, and light broths. His pulse, at the wrist, having been so feeble, I did not think it advisable to extract blood from his arm, fearing, possibly, it might retard the effusion of fibrine.

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## PATHOLOGICAL SOCIETY MEETINGS.

### *January 28th.*

DR. CORRIGAN IN THE CHAIR.

### *Chronic Rheumatic Arthritis of the Hip Joint.*

**PROFESSOR R. W. SMITH** exhibited the hip joint of a patient who had for many years been the subject of chronic rheumatic arthritis. The patient from whom the specimen was obtained had been subjected to much hardship so long ago as the year '98, when probably the seeds of this malady were sown.

Professor Smith was only induced to bring before the society a specimen of a disease so well known here, on account of its presenting, in a remarkable degree, all the features of the affection.

### *Dislocation between the first and second Phalanges of the Little Finger.*

**DR. FLEMING** exhibited a cast taken by Mr. Morgan, resident pupil in the Richmond Hospital, of the appearance presented in a recent dislocation between the first and second phalanges of the little finger (there could not be a more faithful cast). It contrasts very remarkably with that exhibited at one of the late meetings of the society by Mr. Adams, where the dislocation existed in the thumb, between the first phalanx and the metacarpal bone. The dislocation occurred in the early part of the day, and was produced by the effort made by a policeman to stay a run-away horse by seizing the bridle. The salient features of the dislocation are most accurately delineated in the cast, and mark the special variety where the distal extremity of the first phalanx is thrown prominently forwards towards its palmar aspect, whilst the proximal of the second phalanx occupies the dorsal.

The reduction was effected with the greatest ease; and, as in the case mentioned by Mr. Adams, by using at the same time flexion, as if exaggerating the deformity, and traction forwards.

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### *February 4th.*

DR. LAW IN THE CHAIR.

### *Tubercular Peritonitis.*

**DR. CORRIGAN** brought before the meeting the recent preparations of a case of tubercular peritonitis, and said:—

The preparation which I have an opportunity of submitting to the society possesses, I believe, some points of interest. It is a case of tubercular peritonitis, with extensive tubercular deposit, not only in the abdomen, but also on the surface of both pleuræ and in the lungs. The preparation was taken from a boy, aged seventeen, Andrew Connor, who came under my observation in the first week of November, 1853, in the Whitworth Hospital. His appearance was as follows:—face slightly swollen, as well as the limbs, both upper and lower; the abdomen much distended, measuring forty-three inches round the umbilical region; on change of posture the lowest part of the abdomen became dull, and the highest tympanitic, showing that the fluid was free to roll in every direction; the sounds in the chest were normal, except an occasional sibilus, produced, apparently, by the pressure upwards on the lung by the fluid, but there was no sign of disease, pulse varying from 100 to 116; the gums and teeth were fully developed; the tongue was moist, and did not indicate any mucous irritation; he was free from hectic; the urine was high-coloured, scanty, not albuminous, and occasionally depositing purpurates. The question to be determined was, what was the nature of the dropsy under which he laboured; and one of my reasons for bringing the case forward is, that it illustrates one of the varied forms of dropsy, both in its progress and termination. That it was not from cirrhosis of the liver, was evident from the dropsy not being confined to the abdomen, as it generally is in cirrhosis, in which, usually, while the dropsy may be very great in the abdomen, the face is much wasted, so as to resemble a skin stretched over a skull. This boy had a full upper lip, and a face somewhat œdematous; he had no congestion of the face, or obstruction of the jugular vein; no pulmonary apoplexy, or signs of cardiac disease. It was not dropsy from Bright's disease, for the urine presented only the characters I have mentioned. It was not dropsy from mesenteric disease, or tubercles in the mesentery, for in such cases the dropsy comes on in the last stage, preceded by considerable mucous irritation, and extreme emaciation; he was not much wasted.

The history was this:—about ten months before admission, he was exposed to much hardship and cold, lying in his wet clothes; he then suffered from pains in his body, and symptoms of fever; on recovering from fever the dropsy appeared almost simultaneously over his whole body. He, himself, first noticed it about his feet and ancles, soon spreading over his whole body. He remained without treatment, exposed to cold, want, and poverty, up to his admission into hospital. Taking all these circumstances into consideration, the conclusion arrived at was, that the liver was enlarged, and that the dropsy bore the same relation to acute dropsy that unhealthy inflammation does to healthy. Elaterium and other medicines were exhibited, and the dropsy considerably subsided; he got cough; crepitating râles were audible over both lungs, especially the right, where, on careful examination, there was also some dulness. January 30, he died, wasting having taken place to an extreme degree within the space of four weeks.

I shall now draw your attention to the *post mortem* appearances. On opening the abdomen, we found a large quantity of serous fluid; the convolutions of the intestines were fastened together by an unhealthy gelatinous lymph; the surfaces of the liver were covered with the same unhealthy deposit, its upper surface adherent to the diaphragm; the omentum was studded with tubercles, and between the curvature of the stomach and the colon, there was a tubercular mass the size of an egg, and the false membrane studded everywhere with miliary tubercles. On tearing up the diaphragm from the liver, we found masses of tubercles under it, but they did not penetrate the substance of the liver. The mesenteric glands were almost universally free from tubercular deposition; tubercles were found in both lungs, especially the right, in no part, however, had they passed into a softened stage; the heart was completely adherent to the pericardium, but there was no sign of endocarditis, or valvular disease; the kidneys were congested, but otherwise healthy.

Running back over the history of the case, the points which induced me to bring forward the case are the following:—The first step in the process appears to have been an unhealthy inflammatory affection of the subcutaneous and serous tissues. The subsequent deposition was then the result of this unhealthy subinflammatory action; the mesenteric glands were nearly healthy, and, therefore, not the starting-point of the disease; the same observation applies to the lungs. Hence, we have the history here showing, as one of the causes of dropsy, an unhealthy inflammation, producing, finally, tubercular deposit, which was not the primary step, but the result of this long-continued unhealthy subacute inflammatory action, and thus demonstrating one of the origins of tubercles, which appears to be merely a deposition of unhealthy lymph. The adhesions of the intestines are worth notice, as they did not interfere with the peristaltic motion of the intestines, for the boy had diarrhœa in the latter stage. The effect of adhesions of the pericardium is still a debated point amongst authors of eminence; many state that it leads to hypertrophy of the muscular structure of the heart; I do not think this is the case; here there was no effect produced on the muscular tissue by it. It also shows that there may be pericarditis as well as endocarditis, independent of each other; there was no trace of endocarditis. The last point which I shall mention is with regard to the crepitating râles, the amount of which existing in any case is not to be considered as an index of the amount of tubercular deposition; for in this case, had we taken the extent of the crepitating râles as an index of the amount of tubercular deposition, we should have supposed it much greater than it was. The right lung was particularly congested, and had the boy lived much longer, the continuance of unhealthy inflammation in the lung would have probably produced, in lung as in abdomen, more extensive tubercular disease. One of the greatest objects of pathology should be to discover the first steps in disease. The opposing theories of the inflammatory or non-inflammatory origin of tubercle have their supporters. There is no good reason for adhering exclusively to either theory: that tubercle may arise as a mere lesion of secretion may be admitted, while it is not inconsistent with such admission to advance, as this case shows, that it is often the effect of low, inflammatory action long continued, and, therefore, amenable to treatment; and, in this form, demonstrating to us the great practical importance of subduing such treacherous forms of inflammation, whether pulmonary, cerebral, or abdominal, that, left unchecked, would ultimately end in its formation.

In No. I. of this Journal, for February 1st, is a most interesting communication from Mr. Hamilton, showing the state of the synovial membrane and head of the femur in a boy, who was attacked by incipient white swelling of the knee joint, when the disease was arrested by phthisis, of which he died, in which the synovial membrane of the knee and head of femur was in a state of well-marked, unhealthy congestion, without tubercle; and in which case it would, I think, be at once admitted, that had the boy not been cut off by phthisis, and the disease of the joint arrested, tubercle, as in the case before us, would have been the ultimate result of long-continued unhealthy congestion.

## SUMMARY.

*On a new Method of detecting Hydrocyanic Acid in Cases of Poisoning; and on the Conversion of that Compound into Hydrosulphocyanic Acid in the Body, by the Hydrosulphuric Acid and Sulphide of Ammonium evolved during Putrefaction.*—By William Herapath, F.C.S., and Thornton J. Herapath.—In the last number of the *Chemist* for the present month, there is an important communication on the above subject by the Messrs. Herapath. They were led to this discovery by being called on some time since to examine the exhumed body of a young lady, who was suspected to have committed suicide by prussic acid. On examining the contents of the stomach and intestines they were not able to detect the presence of prussic acid; but, on analysing the blood, though they could not prove the presence of free hydrocyanic acid, they were able, however, to detect a small quantity of hydrosulphocyanic acid. Hence, they were led to suppose that the hydrocyanic acid (if any had been taken) had undergone decomposition in the body, and had been converted into hydrosulphocyanic acid, or a sulphocyanide; and they stated, as their belief, that the deceased had been poisoned by prussic acid, or by some substance containing that acid. This opinion was further confirmed by subsequent evidence, which showed that the deceased had some intention of committing suicide; and a bottle of the oil of bitter almonds was afterwards found in her escritoir. Being satisfied that the hydrocyanic acid in this case had undergone the change before noticed, the Messrs. Herapath undertook a series of experiments in order to determine if this conversion of hydrocyanic acid into hydrosulphocyanic acid, would enable toxicologists to detect this virulent poison in many cases where the methods now followed would afford only negative results. A cat was poisoned by prussic acid, and the body was buried in the ground for twelve or fourteen days, until decomposition had commenced; it was then disinterred and dissected, and as much of the blood as could be conveniently obtained was collected, and carefully evaporated to dryness in a porcelain dish. The brittle mass thus obtained was reduced to fine powder, and boiled with some strong alcohol, and a little pure and recently ignited ivory black, and the solution filtered, and again evaporated to dryness, and the dry residue was dissolved in a few drops of water; this solution was then acidulated with a little pure hydrochloric acid, and finally tested with a very diluted and almost colourless solution of a persalt of iron, when the blood-red coloration characteristic of sulphocyanogen, or hydrosulphocyanic acid was immediately produced. Hence it became manifest, that either sulphocyanogen is a constituent of healthy blood; or that it is formed during its decomposition; or, finally, that in this and the former case it had been derived from the action of the prussic acid on the proteine compounds in the sanguineous fluid containing sulphur. The Messrs. Herapath have proved, by direct experiment, that the latter conclusion is correct; for they were not able to detect the existence of sulphocyanogen in human blood, or that of animals, even though several ounces of blood were employed in each case. They obtained an equally negative result from their examination of several specimens of diseased blood; nor were they able to discover the existence of that compound in either human blood or that of animals, which had been left to undergo spontaneous decomposition in partially closed vessels. They afterwards instituted several experiments to determine the conditions under which hydrocyanic acid was converted into sulphocyanic acid, and they found that the prussic acid was not converted immediately into the sulphocyanic acid by the sulphur of the proteine compounds; for it was not produced when prussic acid and albumen was evaporated at a very gentle heat; but, if the heat was sufficient to coagulate the albumen, or if the mixture were left for some hours before evaporation, then they were able to detect the sulphocyanic acid in every instance; now, it is well known that albumen, during its coagulation, evolves hydrosulphuric acid, and that that compound, together with the sulphide of ammonium, is given off during putrefaction. It is evident, therefore, that the formation of the hydrosulphocyanic acid, in the cases noticed, was the result of the reaction of the hydrocyanic acid on the hydrosulphuric acid and sulphide of ammonium. This explains why hydrocyanic acid, in cases of poisoning, so rapidly disappears from the body, and the difficulties of detecting this acid by the methods hitherto employed. It is still to be determined whether sulphocyanogen is ever present in the blood; for, though their experiments go far to show that it is not, yet it may possibly be generated in that fluid during certain diseases. If this point were established, that sulphocyanogen never occurs in the blood, except where hydrocyanic acid, or some of its compounds, had been taken, the detection of this virulent and subtle poison would be almost as easy and certain as Reinsch's test for arsenic.

*Preparation of pure Caustic Potash.*—By F. Wöhler.—When nitre is heated to redness with metallic copper, its nitric acid is completely decomposed, and a mixture of pure potash, with oxide of copper, is obtained. In this way, pure potash, for analytical purposes, can be very conveniently prepared, because it is very easy to procure perfectly pure nitre. To one part of the pulverized nitre, two or three parts of commercial copper are taken in the form of sheet, and so thin that it can be cut into small pieces with scissars. This is placed, with the nitre, in alternate small layers, in an iron crucible, which, when covered, is exposed for about half an hour to a moderate red heat. After cooling, the contents of the crucible are treated with water, with which they become strongly heated. The solution of potash is then poured into small cylinders, which can be closed, and, when quite clean, drawn off from the deposited oxide of copper by means of a syphon. It contains no trace of copper dissolved. It will be most convenient to employ, for this operation, a copper crucible, as by the use of an iron one (for example, a cast-iron crucible), the potash becomes contaminated with carbonic acid and silica. Iron decomposes the nitre quite as completely as copper; but, on account of its containing carbon, silicium, phosphorus, &c., it is not suitable for the preparation of pure potash. With the above proportions of nitre and copper, the latter is only partially converted into protoxide. It can be employed a second time for the preparation of potash, when, to one part of nitre, one part of this oxide, with one part of metallic copper, is taken.—*Liebig's Annalen.*

*Microscopic Characters of Hair as an Indication of Differences in Race.*—At a meeting of the Medico-Chirurgical Society of Edinburgh, Dr. Simpson mentioned that in a letter which he had received from Dr. Daniel Watson, late secretary to the Society of Antiquaries of Edinburgh, and now of Toronto, Dr. W. stated that, on passing through New York, he had found the scientific world there busy in the investigation of the discovery of racial differences by means of the microscopic characters of the hair tubuli. The passage in Dr. W.'s letter ran as follows:—"Another ethnologist I met with, a Dr. P. A. Browne, has been carrying on some curious microscopical observations on hair, by means of which he conceives he has arrived at an important type of varieties in races. The section of a Red Indian's hair is cylindrical, that of the white man oval, and its greatest diameter little more than two-thirds of the former, while the pure Negro's is a very much elongated ellipse, nearly flat. The necessity of the hair, submitted to examination, being from a full-blood Indian or Negro, is proved from his affirming that in the case of a half-blood Negro, for example, the woolly hair is not found, as one might expect, more nearly approaching the oval; but it is a mixture of the pure elliptical wool and the pure oval hair. The same, Dr. Browne affirms to be the case with sheep, crossed with animals having hair. The great difficulty must be, however, in procuring satisfactory sections of the hair, for nothing would be easier than for an unskilful operator to convert the cylindrical hair into ovals and ellipses."—*Monthly Jour. of Med. Science, March,* 1854.

*Torulæ in the Urine.*—Dr. Arthur Hassall, from a series of investigations and observations, has arrived at the following conclusions:—that there is a distinct species of fungus, developed in saccharine urine, freely exposed to the air, which occurs in no other condition of that excretion. That it is identical with the yeast plant, and passes through three stages of development, sporules, thallus, and aerial fructification, any of which is distinctive of the species. That as it is sometimes developed in urine in which other tests fail to detect sugar, it is most valuable as a means of detecting diabetes, even in its earliest stages. That the conditions *necessary* for its development are, free exposure to air, an acid liquid, nitrogenous matter to act as ferment, grape sugar, and a moderate temperature. That its power in inducing vinous fermentation is limited to the period when it is in the condition of sporules or yeast. That the penicilium glaucum, or common mould, is likewise often met in diabetic urine. And, lastly, that in very many specimens of urine obtained from patients labouring under diabetes, in a mild form, large quantities of crystallized phosphate of lime were detected.—*Med. Chir. Trans.,* 1853.

*On the Treatment of Diabetes Mellitus by Rennet.*—In the *Edinburgh Monthly Journal of Medical Science* for March, Dr. H. Fearnside relates a successful case of diabetes. Mrs. H., a tall, spare woman, aged fifty-five years, had suffered from bad health for some time, without being able to indicate the existence of any special ailment. She had lost strength and flesh, and for some months before coming under treatment, her debility had increased so much that it was with difficulty that she attended to her ordinary domestic duties. For a considerable time she had remarked that the quantity of urine passed was excessive, and she had been harassed by constant thirst. When Dr. F. saw her, the expression of her countenance was haggard and anxious; the skin was hot and dry; the pulse quick; the tongue was loaded with a yellow fur; she complained of inodorous eructations, heart-burn, and flatulence; the bowels were confined; the thirst inordinate. There was great muscular weakness, and severe pains in the back and limbs. The quantity of urine passed in twenty-four hours was five quarts; it was acid, specific gravity 1.046, and gave evidence, on the application of the potash and copper tests, of containing sugar. After the use of some gentle aperient medicine, the diluted mineral and hydrocyanic acids were prescribed, and, with more or less regularity, were taken for some months; the diet was strictly limited to butcher-meat, fish, eggs, milk, and bran bread. Fresh vegetables, as cabbage, were taken occasionally. Brandy and water were allowed as a beverage. A dose of rennet was taken after each meal. A fortnight after the adoption of this plan, the patient became so conscious of its good effects, that notwithstanding the vigorous exercise of self-denial which it required, no further exhortations were needed to ensure its steady employment. The digestion improved, the thirst subsided; the quantity of urine passed in twenty-four hours fell from five quarts to two quarts, and eventually to three pints, and its specific gravity descended in three months from 1.046 to 1.020. It has now for some months been free from sugar, although the patient has cautiously and gradually returned to her ordinary mode of life. She has recovered, in a considerable degree, her strength, but remains spare and thin.

*Albuminuria in the Pregnant and Parturient Female.*—Dr. Seyfert, after a lengthened series of investigations, has arrived at the following results:—1. Albuminuria is not an essential accompaniment of normal healthy pregnancy. 2. The theory, ascribing albuminuria to the pressure of the enlarged uterus on the renal vessels is inadmissible. 3. When anasarca, from Bright's disease, occurs during pregnancy, the patients are seldom attacked by eclampsia. 4. The albuminuria, in cases of eclampsia, is occasioned by the interruption of the functions of the respiration and circulation by the attack. 5. In all such cases the albuminuria terminates with the attack. 6. Albuminuria is not present in all cases of eclampsia. 7. Albumen is found in large quantities in the urine of epileptics, *immediately after an attack*, but not invariably after every seizure, or in every case of the disease. 8. Provided there be no Bright's disease, this albuminuria, among epileptics, ceases soon after the convulsions, and only returns after the next attack. If therefore, says the author, eclampsia depends on an alteration in the constitution of the blood, are the copious venesections, so universally recommended, judicious? The blood is impoverished during pregnancy; and we know that poisonous matters, commixed with the blood, act much more powerfully when there is an anæmic state of the system. Dr. Seyfert says he has seen the most beneficial effects from the use of chloroform in eclampsia. —*Wien. Medic. Wochensch*, 12, 1853, and *Edin. Month. Jour.*, *Feb.* 1854.

*Kreasote.*—This fluid has recently been subjected to chemical investigation by V. Gorup Besanez. Since the time of its discovery, our acquaintance with its properties has always been exceedingly imperfect; and became much more confused when it was ascertained that phenylic acid, a produce of the distillation of coal-tar, possessed characters so closely resembling those of kreasote as to suggest the opinion that they were identical, and that the differences, presented by the substances bearing these names, were owing merely to accidental admixtures of impurities; this view is further supported by the authority of Gmelin in his Chemistry, who treats of kreasote and phenylic acid as synonymous terms for the same substance. The results of the researches now instituted lead to the following conclusions:—that it is, indeed, certain, that almost all the substances introduced into the western part of Germany, under the name of kreasote, consist essentially of phenylic acid, and are obtained from coal-tar; but it is also quite as certain that, under this name, a substance is sold at a much higher price, which, both in its general chemical characteristics, boiling point, and elementary composition, corresponds almost exactly with the statements, as to these data, by Reichenbach, and more recently by Ettling, and which are well known to relate to a substance obtained in the destructive distillation of wood. The material which was subjected to examination was procured from the tar of wood, chiefly beech, at Dobriss (Bohemia), and at Blansko (Moravia), according to the method originally proposed by Reichenbach, and it corresponded perfectly in its appearance and general characters with his description; being a strongly refractive oleaginous liquid, of a faint yellowish colour, with a peculiar penetrating odour, resembling smoke, and altogether different from that of phenylic acid; extreme cold did not cause the crystallization of the liquid; its specific gravity varied between 1.046 and 1.049; it was perfectly soluble in ether, alcohol, and sulphuret of carbon, and only partially soluble in acetic acid, in which phenylic acid perfectly dissolves at a moderate temperature; it may be further distinguished from this acid by applying the following tests:—1. A splinter of pine-wood, moistened with hydrochloric acid, and dipped into genuine kreasote, should not present any traces of either blue or violet colour. 2. Solution of perchloride of iron, free from acid, should not produce a blue colour as it does with even very dilute solutions of phenylic acid. The author considers the chemical formulæ, hitherto assigned for kreasote, are incorrect; his analyses lead to the conclusion that it consists of $C_{26}$ $H_{16}$ $O_4$.—*Ann. der Chim. und Pharm.*

[It is evident that a practical question of considerable importance in therapeutics is raised by these investigations, respecting the relative value of kreasote and phenylic acid as remedial agents, and one regarding which it would be most desirable to have some satisfactory information; future clinical researches with pure kreasote are now indispensable, to ascertain the medical effects of that agent, and also those of phenylic acid; to decide how far the substitution of the latter for the former is either justifiable or expedient in the treatment of disease.]

*On the Existence in the Human Body of a Substance presenting the same Reactions as Vegetable Cellulose.*—Purkinje has found in the human brain a peculiar substance, which he describes as consisting of concentric layers, presenting a structure analogous to amylon granules. The same substance has subsequently been met with in other parts of the brain, in the superficial layers of the walls of the ventricles, and in the spinal cord. Some observers are of opinion that the acervulus cerebri consists of this substance. Virchow (*Comptes Rendus*, xxxvi. 492) has observed that this substance acquires a blueish colour, when treated with a solution of iodine, under the microscope; and that when sulphuric acid is added, the colour becomes violet, as is the case with cellulose, under the same circumstances. The author also points out the fact, that the part of the brain in which this substance is found is that region the injury of which, according to the observations of Bernard, determines the production of saccharoid urine.—*Pharm. Journ.*

*Researches on the Production of Gallic Acid.*—By M. E. Robiquet.—Ever since M. Pelouze proved that gallic acid did not actually exist in nut-galls, but was merely a transformation of tannin, chemists have endeavoured to discover what were the causes of this metamorphosis. M. Robiquet's father advanced the view that nut-gall contained a peculiar substance capable of converting tannin into gallic acid, *in the presence of water, and out of contact with the air;* and M. Laroque showed that this substance was a veritable ferment, which might be isolated to a certain degree by exhausting the nut-galls of all the tannin they contained, by means of hydrated ether. With the view of ascertaining the mode in which these changes occur, M. Robiquet undertook a careful analysis of nut-galls, and discovered that they contained, besides tannin and the other principles already described by chemists, both pectose and pectase. The latter ferment exists in them in its soluble and in its insoluble state; but the soluble variety is in much smaller proportion than the insoluble; it acts at once on the pectose, changing it into pectine, and on the tannin, which it decomposes into gallic acid and a neutral body, which M. Strœker thinks is sugar, but M. Robiquet considers more analogous to gum. The presence of water, and a temperature of about 77° F., are necessary for this reaction, which should be called by the name of *gallic fermentation.* Tannin, extracted from gall-nuts by ether, contains sufficient pectase to undergo gallic fermentation when its aqueous solution is left to itself; but, if care be taken to purify the tannin, or if it is exposed for a long time to the heat of boiling water, the alteration does not occur, and the concentrated solution may be preserved for an indefinite period in closed vessels.—*See Ann. de Chimie et de Physique.*

*Iodine in Chemical Reagents.*—Barreswill remarks that all, or very many of the reagents employed for the detection of iodine, frequently contain iodine themselves. *Nitric Acid* very generally contains iodine; it may be detected by diluting the acid with an equal volume of water, and passing the vapour, generated in a flask with a delivery tube, into very clear solution of starch. *Nitrates of Potash and Soda* usually contain iodine. For its detection, the salt is treated with pure nitric acid, and the above test applied. The same plan may be adopted for the preparation of pure nitric acid from either salt; five parts of nitric acid are sufficient for 100 parts of nitrate of soda. *Sulphuric acid* usually contains iodine, originating from the nitrates employed in its manufacture. It may be detected as above. *Hydrochloric acid* contains iodine. For the purpose of obtaining potash free from iodine, Barreswill proposes to purify nitrate of potash by repeated crystallization, convert it into sulphate, and then to separate the sulphuric acid by means of pure baryta. Iodine may be detected in bromine, by pouring it into a large excess of solution of proto-sulphate of iron, adding pure nitric acid until the liquid acquires a dark brown colour, and testing the vapour as above. The author states, in conclusion, that he intends to follow up this notice by a memoir, in which he will show that many statements as to the presence of iodine in various substances are erroneous.—*Journal de Pharm. et de Chimie*, 3 Sér. xxiv.; and *Pharm. Journal for March.*

*Means of rendering Iodine soluble in Water.*—Debaugne has observed that iodine is soluble in water, to which syrup of orange is added, and still more so in water containing tannin. Two grains of tannin are sufficient to effect the solution of ten grains of iodine in six ounces of water.—*Notizen aus. dem Geb. der Pract. Pharm., Jan.,* 1853.

*Upon the liquid Perchloride of Iron, and upon the Eau de Pagliari, considered as Hæmostatic Agents.*—By M. Theodore Lafargue, Toulouse.—After some remarks to show the uncertainties of the different modes of preparing the perchloride of iron, the author observes:—"Should this compound be preserved, after the paper by M. Malgaigne, read at the Academy of Medicine, as an hæmostatic agent, it will be best to prepare it by dissolving the crystallized perchloride of iron in a sufficient quantity of distilled water, the perchloride being obtained by passing pure and dry chlorine gas over iron wire, heated to a high temperature. But the eau de Pagliari is strongly recommended by M. Sedillot. It is prepared as follows:—Mix 250 grs. of the balsam of benzoin, 500 grs. of the sulphate of alumina and potash, and 5000 grs. of water; let them boil for six hours, replacing, successively, the loss by evaporation by hot water. The liquid is then filtered and preserved in well-stopped glass vessels. The residue has lost the odour of benzoin, and also the property of burning. The liquid thus obtained is limpid, of the colour of champaigne, of slightly styptic taste, and of aromatic odour; it is slightly acid. The eau de Pagliari caused coagulation of albumen so firm, that no shaking would subsequently dissolve the mass. Resolution upon agitation ensued, when the perchloride of iron was employed in the same experiment."—*Gaz. Med. de Toulouse*, and *Med. Times*.

*Local Anæsthesia; Employment of Dr. Hardy's Instrument.*—M. Nelaton employed this instrument at the Clinique, upon a girl who was suffering from abscess in the axilla, and from a small wound upon the back of the wrist, both extremely painful. The first application of the chloroform vapour on the tumour in the axilla produced an insensibility which lasted three hours, during which time the part could be handled and examined with impunity. After the second application, the abscess was opened; the patient declared she was not conscious of any pain from the operation, and became aware of the fact that it was over only by touching the part with her hand. From this time she had no more pain. The little wound on the wrist fumigated in the same manner, remained quite insensible.—*Gaz. des Hopitaux.*

*On the Blood and effused Fluids in Gout, Rheumatism, and Bright's Disease.*—Dr. Alfred D. Garrod, some time since, read a paper before the Royal Medical and Chirurgical Society, chiefly referring to the discovery of uric acid in the blood—in minute quantities in healthy blood, and in greater quantities in pathological states of that fluid; and more recently he has described a process for its detection, which may be readily employed in clinical researches. To this process the author applies the term of "The uric acid thread experiment." It should be conducted as follows:—One or two fluid drachms of serum of recently drawn blood should be placed in a flattened glass dish; to this is added strong acetic acid, in the proportion of about six minims to each drachm of the serum; when the fluids have been well mixed, a very fine thread is introduced, consisting of from one to three ultimate fibres from a piece of unwashed linen fabric; this should be depressed into the fluid, and the glass put aside in a moderately warm place, until the serum is quite set, and almost dry. Should uric acid be present in the serum in quantities above a certain amount, it will be crystallized on the thread, and readily detected by the microscope in the shape of rhomboidal crystals of uric acid. This test fails in demonstrating uric acid if it is present in quantities of less than 0.025 grains in 1000 grains of serum, which Dr. Garrod considers of great practical importance, as any quantity above that just enumerated constitutes a morbid proportion, so that whenever the thread experiment demonstrates the presence of uric acid, we possess evidence of an abnormal quantity of that product in the blood. By this method of analysis, Dr. Garrod has succeeded in proving the presence of uric acid in certain morbid effusions, in the abdominal fluid, and pericardial effusion in cases of granular kidney; and he has also succeeded in discovering uric acid in fluids artificially effused by blistering agents. This is a point of much importance, especially in relation to diagnosis, for it often happens that, from the state of the patient, the abstraction of blood for the purposes of analysis is undesirable; but, by the application of a blister, the effused serum affords a means of determining with remarkable accuracy the presence or absence of uric acid in the blood. An examination of the serum obtained from a variety of blisters, in different cases, demonstrated the singular fact, that the presence of local inflammation in a part has the power of preventing the appearance of uric acid in effused serum.—*See Med. Times and Gaz., March 25th.*

*Nerves of the Cornea.*—These have been examined by Luschka, who proceeds by removing the conjunctival layer and the posterior elastic membrane, and then macerating the fibrous membrane of the cornea in dilute acetic acid. The nerves he describes as being extremely delicate, and branching dichotomously in the substance of the cornea, and without any indication of ending in loops. The eye of a white rabbit is that most suitable for these investigations.—*Zeitschrift für Rationelle Medizin,* No. X., and *Assoc. Med. Jour., March 24th.*

*Malformation of the Pulmonary Valve, and Contraction of the Aorta.*—Dr. Haldane, Pathologist to the Edinburgh Royal Infirmary, at a meeting of the Medico-Chirurgical Society, exhibited a preparation taken from a woman, aged thirty-one years, who had suffered from bronchitis and great difficulty of breathing. The aorta was very small, barely admitting the point of the fore-finger; its valves were healthy; the pulmonary valves were found fully three times as large, the mitral valve somewhat contracted, the tricuspid rather dilated. No direct communication existed between the right and left sides of the heart, and the ductus arteriosus was impervious. There were four sigmoid valves in the pulmonary artery, one much smaller than the other, but having a distinct corpus aurantii. In general, when the aorta is so much contracted, there is either a pervious foramen ovale, or ductus arteriosus, or an opening from arrested development in the septum of the ventricles; in this case no such communication existed.—*Edin. Med. Jour. for March.*

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## RICHMOND SURGICAL HOSPITAL.

### *Cases of Abscess behind the Pharynx, with Remarks.*

BY CHRISTOPHER FLEMING, M.D., M.R.I.A.,

SURGEON TO THE HOSPITAL.

Case I.—James Murphy, indoor servant, aged 27 years, of spare habit and medium height, applied at hospital in June, 1852, complaining of great difficulty in deglutition, and distressing sensations of dyspnœa supervening at irregular intervals, especially at night. He had been ailing for a month from the effects of cold and damp, which were principally referrible to the regions of the neck and throat, and which were ushered in by ordinary febrile symptoms; deglutition during the last week was most difficult, and sleep at night, attended with such severe paroxysms of breathlessness, that he dreaded the idea of lying down. These symptoms were aggravated by any attempt to swallow even the smallest quantity of fluids, they being instantly and forcibly ejected through the nares, unless he observed the greatest caution. He had now, occasional chills and perspirations, and was altogether completely prostrated. On proceeding to examine the throat, the difficulty in throwing back the head, and the great pain experienced in attempting any movement of it, were remarkable. Great uneasiness was complained of in depressing the tongue, when, on inspecting the fauces, a considerable tumour presented itself, bulging forward the back of the pharynx. It had all the character of an abscess, and on opening it, by a transverse incision, with a sharp-pointed bistoury, a large quantity of purulent matter was dashed forwards.

This occurred on the 26th of June; on the 28th it was necessary to free the opening with a probe, and on the 6th of July all local distress had, in a great measure, subsided, and the general health was rapidly improving.

Case II.—Eliza Beck, aged two and a-half years, was carried to the Netterville Institution, labouring under dyspnœa, so extreme during the preceding thirty-six hours, as to threaten immediate suffocation. Within that period she was totally unable to swallow fluids or solids, and the respiration was so loud during sleep, that (as the mother remarked) she could be heard at the lowest part of the house. The child was miserably emaciated, the countenance wan and pallid, the pulse a mere thread, and the skin cold and clammy; she lay semi-recumbent in the mother's arms, and was in an apparently lethargic state, the eyelids partially closed, the mouth full of frothy saliva, and the throat, as manifested by the respiration, filled with mucus. The retracted state of the head was very striking, giving an unnatural curved form to the cervical portion of the spine, whereby the whole laryngeal region was rendered peculiarly prominent. When raised in the arms, the child was fully conscious, and whined with a peculiar cry. I detected a large abscess occupying the back of the pharynx, and so prominent as almost to conceal the base of the tongue.

Having transferred the child to hospital, I made an opening in it, as in the above case, when an enormous collection of purulent matter was discharged. She drank freely immediately afterwards, and fell into a tranquil sleep. I now learned that this child had been thrown, about six months back, on her head, from a small basket-car, and that since that period she laboured under many of the symptoms of disease of the cervical vertebræ, for the relief of which she was under treatment. I have repeatedly seen her since the abscess was opened, and she appears to progress as favourably as, under the circumstances, can be expected, the dyspnœa and dysphagia having completely subsided.

*Remarks.*—The surgeon should be prepared for the presence of "abscess behind the pharynx" at the different periods of life. In a memoir which I published on the subject some years back,[*] cases have been noted at the earliest ages, and in the first volume of the preceding series of this Gazette,[†] Dr. O'Ferrall reports a most interesting case which occurred at the age of four months. A year seldom passes during which I have not an opportunity of seeing this class of abscess in the child and in the adult, acute or chronic in its progress, and primary or consecutive in its nature, of the two latter varieties of which, the cases now reported are good illustrations. The equivocal character of the affection may certainly lead to inaccuracy in diagnosis, and for obvious reasons, in the infant and child. If, however, the history of such cases be carefully considered, and if the surgeon contrast such with the prominent symptoms he witnesses, the presence of the abscess will not fail to be recognized. It is to be recollected, that its situation is not necessarily in the mesial line; that it may be placed laterally; moreover, that it may be seated below the level of the tongue, and hence, only discernible by the touch. Much circumspection is required in opening those abscesses. Latterly I prefer the bistoury to the trochar, using that which is sharp-pointed, and either specially provided for the purpose or temporarily adapted, with the protection of lint or adhesive plaster. It will be found advantageous to make the opening transverse, which can be easily done by carrying the flat surface of the blade, guided by the finger of the left hand, parallel with the tongue. Such opening is more likely to remain patulous, as from the extreme tension of the sac the lips of the incision absolutely spring under the knife, and a fit of cough or dyspnœa supervening at the moment, the contents of the abscess are violently ejected forwards, and the opening necessarily widened. I must, however, add, that even with this precaution, so great a disposition is there to its closing, particularly within the first twenty-four or forty-eight hours, that surgical interference is almost indispensable to remedy it. It is easily effected with a probe or director. The ultimate cure of cases of abscess behind the pharynx, even in their acute and primary form, is slow; how much more so must it not be in the consecutive and chronic, such as the second case I have detailed. The relief, however, from suffocation and other almost fatal symptoms, is as rapid, in all cases, as it is satisfactory to the surgeon.

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## MEATH HOSPITAL.

### *Typhus Fever; Peculiar Form of Eruption; Attempts at Crisis; Collapse; Pleuro-pneumony; Albumen in Urine, and Pleurisy with Effusion—Case of; with Observations.*

BY DOCTOR LEES,

PHYSICIAN TO THE HOSPITAL.

*Reported by* MR. ARTHUR SAMUELS.

Martin Cullen, a footman, æt. 23, admitted into hospital, February 18th. Face livid and congested; skin hot and dry; temporal arteries throbbing; eyes bright; pupils slightly dilated; tongue white, and rather moist; pulse 92, weak; heart's impulse strong and regular; both sounds distinct. He is quite conscious, and complains of intense pain in the left side of the head, and in the small of the back; also, of a sense of fulness in the belly, which is somewhat tympanitic, but not tender on pressure. Water passed well; bowels regular.

***Some spots or stains, of a light blue or lead colour, are seen scattered irregularly over the chest, abdomen, and loins. These spots do not disappear on pressure;*** they are unlike ordinary maculæ; but appear as if a solution of indigo were applied over the body, with the tip of the finger.

His illness, which he considers to have been brought on by sleeping in a newly-built and very damp room, began *six* days ago with shivering, followed by increased heat, headach, vomiting, pain in the back, and slight cough. Before admission, he took some purgative pills, and was cupped at the back of the neck, without any relief to the headach.

℞ Hyd. c. creta.
  Pulv. antim. āā. gr. xij. in pilulas viij.
Sumat i. 3tiis horis.

An evaporating lotion to the head, and three leeches behind the left ear.

Feb. 20th.—Seventh day of illness. Headach better; face not so congested; pulse 92; tongue moist, and coated at the base with a brown fur; no thirst; abdomen flaccid. He complains of want of sleep, but the nurse reports that he slept very well. No change in the appearance of the spots. Ordered to take an ounce of the following mixture every third hour:—

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[*] Dublin Journal of Medical and Chemical Science (Old Series), vol. xvii.

[†] DUBLIN HOSPITAL GAZETTE (Old Series), vol. i.

℞ Sodæ bicarb. ℈i.
Tinc. aurant. ʒi.
Mist. camphoræ, ℥viij.
M. Ft. mistura.

To omit the pills.

Feb. 21st.—Eighth day. Slept well last night; had some perspiration, and feels better this morning; quite free from the pain in the head, but not from the pain in the back; pulse 84; *no ecchymosis round leech bites*. The urine passed last evening exhibits a copious deposit of lithates.

Ordered to have tea diet and arrow-root; and to continue mixture.

Feb. 22nd.—Ninth day. Slept pretty well; passes plenty of water; bowels regular; an attempt at doubling noticed in the pulse, which is down to 80; heart's action a little excited.

Feb. 23rd.—Tenth day. Pulse 80; the double character not so evident; had epistaxis last night; diffused tremulous pulsation in the vessels of the neck; a cloud is observed in the urine, but no deposit; there is some decided enlargement of spleen; bowels regular; does not complain of thirst.

Feb. 24th.—Eleventh day. Had an attack of diarrhœa last night, the bowels being affected four or five times, stools like pea soup, and this morning vomited some sour liquid; face congested; feels extremely weak, and cough is more troublesome than it has been; pulsation in the vessels of the neck more violent; pulse 92, weak, dicrotous; tongue dry and brown; heart's action excited; no deposit in urine; abdomen flaccid.

Feb. 25th.—Twelfth day. Bowels were affected eight or nine times in the course of last night; he had a slight attack of epistaxis, and severe vomiting; got four ounces of wine through the night; pulse 96, full; tongue red at the tip, dry and brown in centre; some blue spots have made their appearance on the thighs; no tenderness in the abdomen.

℞ Acet. plumbi, ℈i.
Acet. morph. gr. i.
Acet. distillatæ, ʒi.
Aq. distillatæ, ℥viij.
Ft. mist. Sumat ℥i. 3tiis horis.

A sinapism to be applied over the stomach, and a warm, soft poultice every third hour over the abdomen.

Six ounces of wine.

Feb. 26th.—Thirteenth day. Feels better; diarrhœa checked; no vomiting; some perspiration; copious deposit of purpurates in urine; heart acting well.

March 1st.—Sixteenth day. Looks better, but has a frequent, short cough; sputa slightly viscid, and streaked with blood; pulse 86; respiration 26; slept pretty well; no diarrhœa; perspired gently; urine has a copious deposit of purpurates; there is a shade of dulness at the base of the left lung, with feeble respiration, and a distant crepitus at end of a deep inspiration; he was ordered to be dry-cupped at the base of the left lung; to lie on the right side; to have a flannel vest; and a mixture, with hippo wine, hydrocyanic acid, and mucilage, to allay his cough, which was very troublesome.

March 2nd.—Seventeenth day. A great change appears in his countenance, which is pallid, with lividity of the lips, twitching of the mouth and lower jaw; respiration short, hurried, and sighing, 44 in the minute; pupils dilated; expansive pulsation of vessels of neck; heart's impulse very feeble, weak, and intermittent; respiration very feeble all over both lungs; no crepitus or bronchial breathing; he complains of great weakness, and pain under the right false ribs; abdomen not tender, nor tympanitic; urine very high-coloured, but without any sediment; his bowels had been moved three times last night.

A teaspoonful of brandy every half hour.

℞ Spt. ammon. aromat. ʒij.
Mist. camph. ℥vi.
St. ℥i. 2dis horis.

March 3rd.—Eighteenth day. Better; face flushed, but has lost the anxious expression; tongue smooth and clean at tip, and round the edges; pulse 112; respiration 40, still laboured; complains of pain under right false ribs; constant, hard cough, with viscid expectoration, slightly streaked with blood; urine very high-coloured, acid, no sediment; respiration feeble all over chest.

℞ Hydrarg. c. cretâ, ℈i.
Dover. gr. xii. in viii.
St. i. 3tiis horis.

Repeat his cough mixture.

He has had six ounces of brandy since yesterday; so only give a teaspoonful in water every second hour. Plenty of chicken broth, and four ounces of wine, with arrow-root.

4th.—Nineteenth day. Appears better; pulse 112; respiration 36; cough less, but expectoration viscid and bloody; friction sound is heard at the base of the left lung; there is dulness at the base of right lung, with feeble respiration; his powders were repeated, and his wine; also, a blister to the base of right lung.

5th.—Twentieth day. Appears better; perspired last night; pulse 120; respiration 40; sputa viscid, and very bloody; urine deposits copious lithates. Continue treatment.

6th.—Twenty-first day. Much better; pulse 100; respiration 28; sudamina have appeared on the chest; a copious deposit of lithates in the urine, which fluid becomes opaque by heat, and also with nitric acid. Omit powders.

8th.—Much better; urine clear, acid; no sediment, no albumen.

His symptoms gradually improved after this; but considerable effusion into the right pleura took place, evidenced by absolute dulness, and absence of respiration at the base of that side For this he was ordered hydriodate of potash, with bark, and inunction over that side with iodine. Under this treatment he is improving; and I trust that change to the country will restore him to health.

I have detailed this case at considerable length, owing to the peculiarities it presented, particucularly the character of the eruption, which I am *not aware of having been previously recorded.* It bore no resemblance to either the ordinary form of maculæ, so common in the fever of this country, nor to the lenticular rose-coloured eruption which is met with in that form of fever termed typhoid, and to which, judging from its course and symptoms, this case subsequently appeared to belong. At first sight, it was suggested that the eruption might be a form of purpura, and a question was raised as to the propriety of applying leeches, for fear of hæmorrhage; but, from its appearance, from its not occurring in the most depending positions, and from the character of the pulse, I decided against its being purpura; and the healthy condition of the leech-bites, as well as the progress of the disease, satisfied me that I was right, and that it was a peculiar form of eruption not hitherto described, though I think one case occurred under my care last summer, but of which I have, unfortunately, lost the notes.

The partial attempt at crisis, by deposit of lithates in the urine, and perspiration, on the seventh night, with temporary improvement in his symptoms, but succeeded by diarrhœa, vomiting, and epistaxis; a second attempt at crisis on the thirteenth day, indicated again by perspiration and deposit in his urine; the supervention of pneumonia, and the sudden collapse on the seventeenth day of illness, requiring powerful stimulants to keep him from sinking; this state succeeded by pleuro-pneumonia; then a third, and, I consider, a successful attempt at crisis on the twentieth day, again indicated by perspiration, and deposit of lithates in the urine, though disease still existed in the lungs and pleura; this followed by the presence of albumen in the urine, lasting for two days; and finally, the effusion of fluid into the right pleura, a very rare occurrence in any of the forms of fever usually met with in this country, but of which we have had some instances during the present session, as if marking what Sydenham termed the "Constitutio anni:" all these circumstances made the case one of the most interesting I have ever met with, and, I think, worthy of being recorded.

## WHITWORTH AND HARDWICKE HOSPITALS.

### *A Case of Nervous Ptyalism, with Observations.*

BY JOHN T. BANKS, M.D.,

KING'S PROFESSOR OF PHYSIC.

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*Reported by* MR. ALEX. CRAWFORD.

M. A. D., a girl, æt. 16, was admitted into the Whitworth Hospital, on the 28th of November, 1853. She states that about three years since, while at play, she became thirsty, and chewed a root which was very acrid, and caused her mouth to bleed.

A week afterwards, she became ill of fever, but when recovering, she took cold; she had cough, and shortness of breathing, and her body was generally swollen. At this time she found the flow of saliva to be considerably increased above its natural standard; the quantity was very uncertain, never so as to cause much inconvenience. Twelve months since, she became subject to palpitation of the heart; the salivation continued to be profuse, but especially during the last five months. She complains of great nervousness: the catamenia, which first appeared at the age of fifteen, have been, and are, regular. The urine is natural; bowels not confined; no murmur with the heart's sounds. The quantity of saliva which is collected in the twenty-four hours amounts to seventeen ounces; it is of faint milky hue, and frothy; its reaction is neutral, or faintly alkaline, and its specific gravity 1.007; it differs slightly, if at all, in microscopic or chemical characters, from healthy saliva; containing an increased quantity of epithelium from the mucous membrane of the mouth, which subsides, if it is kept for a time, as a dense, whitish cloud. Her taste is unimpaired; she is frequently awoke at night by the saliva flowing out of her mouth.

For several days after admission, the flow of saliva continued nearly at the same rate. She was directed a grain of sulphate of quinine three times daily. The palpitations are more than usually distressing. On the 9th of December, the quantity of saliva was eighteen ounces in the twenty-four hours. The amount varies from day to day—seldom below fifteen ounces, or above twenty.

On the 17th of December, the catamenia commenced, and continued three days, natural in quantity and quality. The salivary secretion remained as before. On 27th, the salivary secretion was twenty ounces. She complains of thirst and headach. A blister was applied to the nucha. The quantity of urine passed in twenty-four hours has been repeatedly collected; it has never been deficient in quantity, nor has it been found, on any examination, to be abnormal. She complains of coldness of the feet, and of being awoke at night by palpitations of the heart.

She has had a paroxysm of hysteria. Directed to take a pill three times daily, containing half-a-grain of opium, and two and a-half grains of camphor. After a week, these pills were omitted, and she got one grain of opium, three times a-day. On this treatment she remained up to the 20th of January.

The flow of saliva continues, uninfluenced by treatment.

On the 20th of January, freshly-prepared charcoal, in scruple doses, was ordered thrice daily. For the first three days, no remarkable diminution of the quantity of saliva took place; afterwards it daily decreased, and on the 28th, she reported that there was no unnatural secretion, either by day or night. Complete cessation now occurred for ten days, and on the 7th of February a slight return, but only to the amount of two ounces. From this date up to the 19th, no unnatural quantity of salivary secretion was discharged during the day, but at night there has been some, and the pillow is found wet in the morning.

A few days after the first cessation of the flux, the charcoal was omitted. On its reappearance, a mixture, composed of infusion and tincture of matico, was ordered; and she was also directed, in addition to taking an ounce daily, to use a portion as a mouth-lotion, repeatedly during the day.

The palpitation and dyspnœa were occasionally relieved by draughts, containing æthereal tincture of lobelia and camphor mixture.

At long intervals, the salivary flux returned, but not to any extent; and finally, before she left the hospital, it had altogether ceased, and neither at night, nor during the day, was there any greater secretion than is present in perfect health.

With salivation, as a *symptom* of mercurial stomatitis, we are very familiar, but, fortunately, not to the same extent as formerly. We also are acquainted with salivation, as the result in certain idiosyncrasies, of the ingestion of various medicinal agents, as iodine, iodide of potassium, preparations of gold and of copper, of tartarized antimony, of digitalis, of opium, and even of castor oil. Salivation is known, also, to occur in pregnancy, in inflammation of the throat, and it has been caused by decomposing wool in the ears. In the former series of this Journal (September, 1845), Dr. Mulock has recorded a case of profuse ptyalism, caused by the introduction of a set of teeth. Dr. M. says, "The spitting was not accompanied with fœtor, but more like what is caused by the continued use of hydriodate of potash. I examined the gold plate, which was perfectly pure; but the springs, from their red colour, I think, contained a small alloy of copper."

In some cases of *non*-mercurial salivation, all the symptoms of mercurial salivation may present themselves, not even excluding "the mercurial fœtor."

The disease of which I have lately had an example, is one of salivary flux, not caused by any medicinal agent. It has been indifferently named essential salivation, sialorrhœa, or nervous ptyalism. Here the salivation is *the disease*, and not a mere symptom. Although cases of this affection are to be found scattered amongst the records of medicine, it is nevertheless rather a rare disease. Drs. Pereira, Christison, and Watson report cases of spontaneous salivation; and M. Tanqueril des Planches published in the "Journal de Medicine" for June and July, Clinical Researches on Sialorrhœa, or Salivary Flux; and collected from all sources twenty-nine cases. The number of females, compared to males, were three to one, and the majority were hysterical. M. Tanqueril des Planches supports the doctrine that salivation may be critical. Otto has seen it at the end of typhoid fever, and Sydenham has observed it occurring critically in dysentery. It has also been numbered amongst the critical terminations of ague by some of the older writers.

In the case reported there had been no medicine taken antecedent to the appearance of the flux, which could account for it. I think we may safely assert, that the momentary irritation produced by chewing the root (probably arum maculatum) had not any influence in the production of the disease. The girl is of a highly nervous temperament, and has had hysterical paroxysms. On many occasions we subjected the mouth to a very close examination, and not a trace of ulceration, or any diseased appearance, could be discovered. The gums were perfectly healthy. After causing her to free the mouth from the fluid flowing into it, the saliva was seen welling up from the ducts, and rapidly filling the mouth again. There was no pain in the parotidean region, nor in the course of the duct of Steno. Thirst was only rarely complained of; and the bowels were not habitually confined. In the course of the disease she lost flesh, and the ruddy, healthful appearance which she presented at first. The ptyalism was intermittent, its disappearance at length was not coincident with any augmented secretion elsewhere.

This affection, distressing though doubtless it is, cannot be looked upon in the light of a serious malady; and, in some instances, it has occurred under circumstances favourable to the individual attacked. A great variety of treatment has been put in requisition in this disease. Blood-letting, purgatives, blisters to the nucha, the legs, &c. Astringents administered internally, and also employed as lotions, tonics, opium, belladonna, even mercury. In this case, tonics, opium, repeated blistering to the back of the neck, failed to influence the salivary flux. Fresh vegetable charcoal, as recommended by Rayer, was given, and, under this treatment, the flow gradually decreased, and soon was arrested altogether. There have been occasional returns of the affection, but to an extremely slight amount. Matico taken internally, and used as a mouth lotion, has been also found beneficial, but in estimating the value of remedial measures in nervous ptyalism, we should not lose sight of the fact, that the tendency of the disease is to disappear spontaneously, and sometimes as suddenly as it had originally appeared.

## *Clinical Reports, with Observations.*

BY DR. M'DOWEL,

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### 1.—*Diseases of the Nervous System.*

Several remarkable cases of disease engaging the nervous system have recently been treated in hospital; of these the following seem to possess more than ordinary interest, and, as such, to be well adapted for the pages of a clinical journal.

They are described in the order in which they came under observation.

CASE I.—*Atrophy of the left Eye, of two Years' Duration; Progressive Softening of the left Optic Nerve, Optic Commissure and left Optic Tract, and consequent Loss of Vision of the right Eye.*—Denis Delany, æt. 60, admitted December 7th, 1854, labouring under malignant disease of the pylorus. A large firm tumour, perceptible to both sight and touch, lay on the confines of the epigastric and right hypochondriac regions; pain in the stomach, sour and sometimes fetid eructions, with frequent vomiting, especially after meals, were the principal symptoms complained of. Grumous blood, in large quantities, was often vomited. The patient was greatly emaciated, and the sallow, unhealthy aspect, so generally associated with malignant disease, was strongly pronounced. Vision had been lost in the left eye for two years previously, the result, as the patient stated, of acute inflammation, and the eyeball, in consequence, was shrunken and atrophied. This circumstance, though unconnected with the disease for which the patient was admitted, becomes of interest from what subsequently occurred.

This man had been about one week under observation, when he *suddenly* lost the power of vision in the right eye. On a particular evening (Friday) he was able to see with the right eye as well as he had ever done (for, notwithstanding his age, there had been no impairment of vision in his remaining eye); on the following morning he was distressed to find that he was totally blind. We examined the eye very carefully, but the only abnormal condition we could detect was extreme contraction of the pupil, which condition proved constant, whether much or little light was allowed to fall upon the eye. The dioptric media were of their normal clearness, and there was no increase of vascularity on the conjunctival surface.

I felt at a loss to explain satisfactorily the cause of blindness in this case. The existence of malignant disease elsewhere suggested the idea that a tumour, likewise of a malignant nature, had formed at the base of the brain, and implicated the nerves of vision; but many circumstances, which it is unnecessary to advert to, rendered this explanation improbable.

Two days afterwards a chemosed state of the conjunctiva had become developed; but the membrane, though greatly swollen and elevated, was perfectly pale and colourless. The pupil was still extremely contracted, and not even the slightest perception of light remained.

The man left the hospital, December 23rd, greatly dissatisfied at having lost the sight of his only remaining eye, and if, as is likely, he associated this occurrence in his mind with the result of our treatment of his stomach disease, we could not greatly blame him, as events, apparently less connected together, have been before now erroneously supposed to be related as cause and effect.

In about ten days he returned, and once more sought admission. He was greatly reduced from repeated hæmorrhages, and was almost in a dying state.

The right eye was rapidly becoming disorganized; the cornea was sloughy and flaccid, and pus flowed freely from the conjunctival surface.

The immediate cause of death, which occurred rather suddenly two days afterwards, was hæmorrhage into the stomach.

*Post Mortem Examination*, January 4th.—*Abdomen.*—Stomach greatly distended with grumous blood, which had been poured out from a malignant fungous growth, occupying the pyloric end of the viscus. This formed a portion of a cancerous mass which engaged the head of the pancreas and the pylorus, the orifice of which was narrowed.

*Brain and Optic Nerves.*—The *left* eyeball, as has been already stated, was shrunken and atrophied, and had been so for two years previously. The optic nerve on this side was not only atrophied, but diseased and disorganized. The fibrous arrangement of the nerve was wholly lost, and in its stead was a soft, gelatinous, semitransparent structure of a greyish yellow colour.

This morbid condition, which, no doubt, originated in the nerve, spread backwards to the optic commissure, which was softened in its centre, and could thence be traced through the commissure into the opposite tractus opticus. The softening, which extended obliquely *from* *the left optic nerve through the commissure into the right optic tract*, consequently intersected the fibres of the right optic nerve, and by cutting off the connexion between the right retina and the brain, necessarily caused total blindness of the right eye; although the eye itself, its optic nerve, and optic tract, up to its origin at the brain, were intrinsically healthy.—(A drawing, by Mr. Connolly, which very faithfully delineated the diseased appearances here described, was exhibited to the Pathological Society, February 18th, 1854.)

The brain presented an extremely anæmic appearance, and the arteries at its base were much diseased.

*Observations.*—I am not aware of there being any record of a case similar to the one here described, in which softening of an optic nerve, consequent on atrophy and disorganization of the corresponding eye, being propagated backwards, engaged the centre common to both nerves, and hence involved the opposite eye in sudden and incurable blindness. The suddenness with which this effect was produced cannot be regarded as an exceptional occurrence. Many facts in the pathology of the nervous system have established this proposition, that a morbid change may exist in the brain for a considerable time, unaccompanied by any or by only vague symptoms, until a particular period arrives, when suddenly are developed all the symptoms which such an amount of structural change, as subsequently is revealed, might be expected to produce.

Thus, the *first* symptoms of abscess in the brain may be paralysis and coma; and the symptoms of acute softening of the brain may be so suddenly developed, as to resemble those of an apoplectic seizure.

It is fortunate that such a morbid condition as this case illustrates is not often met with, as otherwise the duality of the organ of vision would not prove such a security as it generally does against total blindness, in the event of disease or accident destroying one eye; and when such a privation had been experienced, we should always be apprehensive of the consequent loss of the remaining eye.

It is unnecessary to dwell upon the beautiful illustration here furnished by pathology, of the decussation of the optic nerves in the optic chiasma. In this instance, the morbid action set up in the nerve of one side (the left), extending backwards into the chiasma, and following the oblique course of the filaments along which it had travelled, spread yet further backwards, *across* the chiasma, into the tract of the opposite side (the right).

One symptom in this remarkable case seems to require some explanation, viz., the extremely contracted state of the pupil, which was observed from the very commencement. In the ordinary forms of amaurosis, a condition the reverse of this usually exists, and the pupil, though equally insensible to light, as in the case under our consideration, is more or less dilated.

Physiology furnishes us with some facts which may be adduced in explanation of this circumstance. The contractility of the iris, in obedience to the stimulus of light, is the result of reflex action; that is, the impression produced by a bright light does not act directly on the iris, but being transmitted from the retina, along the optic nerve, to the sensorium, is reflected back again by the channel of the third pair of nerves, to the iris, and the result is the contraction of that muscle, and diminution of the size of the pupil. Mayo's experiment, which established this fact, was a perfect demonstration of reflected nervous action, at a period prior to the complete development of the doctrine of reflex action, by Marshall Hall. When the optic nerve in a rabbit was cut across, the pupil no longer acted on exposure to light; when the extremity of the divided nerve, next the retina, was pinched or irritated, no change was effected in the iris; but, on the contrary, when the end of the nerve, next the brain, was similarly treated, energetic contraction of the pupil ensued. We may suppose that, in our case, disease acted as a local irritant on the fibres of the right optic nerve, the stimulus of which, conveyed to the brain, was reflected along the third pair of nerves, to the iris, and thus caused contraction of the pupil. In Mayo's experiment, as the irritation of the nerve was transient, so, likewise, was the effect on the iris: in the experiment performed by disease, as the cause of irritation was constantly maintained, so the effect (contraction of the pupil), was equally permanent.

CASE II.—*Syphilitic Meningitis; Incomplete Paralysis; Disturbance of the Mental Faculties; Treatment by Mercury; Recovery.*—Philip Reilly, æt. 22, a sailor, admitted January 4, 1854. This patient was admitted for pains in his joints, which, from the history he gave, were supposed to be of rheumatic origin. The shoulder, elbow, and knee-joints, were stiff and painful on motion; but, unlike what is seen in rheumatic arthritis, they were neither red nor swollen. The patient was exceedingly lame, and walked with much pain and difficulty.

On closer investigation, these symptoms were found to be linked with syphilis, not with rheumatism. A scaly, copper-coloured eruption existed over a considerable portion of the cutaneous surface, and there was much tenderness on pressure of the periosteum of the cranium, over both parietal bones, with severe cephalalgia. Eight months previously, the patient contracted syphilis; the primary sore healed without treatment, mercurial or otherwise. About three weeks before admission, after feeling unwell for a few days, the eruption made its appearance. Ordered—

Misturæ potassii iodidi, ℥i. ter in die.

For some days, he improved rapidly; the rash, which, on admission, was declining, quickly faded away, and the pains in his joints were much relieved. He complained, however, occasionally, of other symptoms, the true import of which were not at that period fully recognized; thus, he stated that, before his admission, he had suffered from frequent giddiness and headach, and after his admission, occasional vertigo was complained of, with pain in the head, and back of the neck.

January 10th.—It was reported that on the previous day the patient had become rather suddenly affected with partial loss of power of both lower extremities, and of the right upper extremity; that during the night he had been delirious, vociferating loudly, and struggling to leave his bed; that he had slept none, but had become calmer and more rational towards morning.

When visited in the morning, he was quite rational, though his manner was greatly confused; he spoke thickly, and his articulation was very indistinct. He complained of a dull pain in his head; his eyes were suffused, and had a heavy expression; pupils dilated, but vision unimpaired.

He vomited frequently, especially after any exertion, and, when placed sitting up in bed, he vomited immediately. The pulse was readily affected by change of position, becoming increased in frequency when the patient sat up; at other times it was of natural frequency, but small and compressible. There was more or less of general paralysis present, but the lower extremities and the right upper extremity were the most enfeebled; the face was slightly distorted, the mouth being drawn towards the left side, whilst the right cheek was more flaccid than natural; the tongue was perfectly clean; bowels confined.

*Treatment.*—Eight leeches behind the ears; a purgative dose of calomel and jalap, to be followed by the administration of calomel and James's powder, in small but repeated doses.

11th.—Patient wandered a little in his mind last night; heavy, stupid manner still observed; vomiting has ceased; paralysis is yet partial; the patient is able to walk, but he does so in the most vacillating and unsteady manner. Blister to the nape of the neck; to continue the pills.

12th.—Appears to have more power over the right arm; expression of countenance improved; mouth slightly affected.

13th.—Ptyalism established; improvement continues; no distortion of the face is now appreciable, and he speaks more distinctly; diarrhœa, with some slight febrile excitement exists, depending, no doubt, on the action of the mercury on the system.

14th.—Pupils are natural, and contract briskly; pulse 80; patient still walks very unsteadily; but has more power over his limbs.

It is unnecessary to continue further the minute details of this case; it is sufficient to state that each day's report showed a progressive and even a rapid amendment; strength gradually returned in the limbs, and the power of controlling their movements was also regained. In three weeks from the last mentioned date, no trace of paralysis remained. At this period, as if to confirm the opinion that these remarkable symptoms had their origin in syphilis, dimness of vision was complained of, depending on an inflammatory affection of the deeper seated structures of the eye, whilst a fresh crop of eruption, which was rather of a pustular form, appeared to a limited extent on the legs and arms.

Iodide of potassium was then prescribed, which, combined with the use of blisters to the temples and behind the ears, completely removed every symptom of disease, and the patient left the hospital in February, apparently in perfect health.

*Remarks.*—Though cases, such as the one last described, are not very frequently met with in practice, they are not, therefore, like some other affections which come under the denomination of *cas rares*, to be regarded merely as medical curiosities. Their nature and true import should be thoroughly understood and investigated, as, on a correct interpretation of their symptoms, the success of treatment mainly depends.

That cerebral symptoms are rarely of a syphilitic origin may be inferred from their not being described in the best monographs on syphilis.* In the "London Medical Gazette," January 3, 1851, will be found a most interesting clinical lecture on Syphilitic Meningitis, by Dr. Todd. Dr. Read, of Belfast, has also recently contributed a valuable paper on the same subject, which will be found in the "Dublin Quarterly Journal," vol. xiii., N. S.

The case above recorded differs from those described by Dr. Todd or Dr. Read in two particulars, first, in the occurrence of the cerebral symptoms along with, or very soon after, the development of the more usual secondary symptoms, in other words, at an early period in the syphilitic history of the individual; and, secondly, in the greater acuteness of the symptoms, and the greater rapidity with which they became developed.

I am not altogether convinced that the term syphilitic "meningitis" correctly describes the exact pathology of the affection, illustrated by the preceding case. In a fatal case, in which the symptoms were very similar, traces of arachnitis, tumours of the dura mater, and consequent pressure on, and softening of the brain, were found by Dr. Todd; but the suddenness of the invasion of the disease, and the rapid disappearance even of the most formidable symptoms, may raise some doubts as to whether, in all other cases, such very serious alterations of structure could have existed. The circulation through the brain of a greatly deteriorated or poisoned blood, is, under other circumstances, capable of producing many of the symptoms of meningitis, and perhaps the impure blood of a syphilitic patient may occasionally, to a certain extent, give rise to the symptoms of a disordered brain. We have sufficient proof, however, from the cases already recorded, that if the proper treatment be not adopted, the symptoms undergo no improvement, whilst structural changes, even if they do not exist from the very first, at all events become subsequently developed, at which period complete recovery has either become impossible, or much more difficult of accomplishment.

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* John Hunter, Carmichael, Colles, Ricord.—Hunter states that the brain is one of the organs exempt from the effects of syphilis. Ricord alludes to epilepsy, but not to any other form of cerebral affection in connexion with syphilis.

Whatever difference of opinion may exist as to the mode of conducting the treatment of syphilis in its more ordinary forms, there can be none as to the proper course to be pursued when a vital organ, such as the brain, becomes acutely engaged.

Under such circumstances, just as when the iris becomes affected, the administration of mercury is rendered necessary, and the rapid improvement which occurred when ptyalism was produced, in the case of Reilly, was no less remarkable than gratifying.

In the more chronic forms of the affection, mercury has proved equally successful, whilst, in the hands of Dr. Todd, the iodide of potassium has also been most efficacious.

It is not a little remarkable how much the prognosis, in certain affections of important organs, is modified by the circumstance of such affections being associated with, or dependent on, a syphilitic taint of the system. In the pulmonary affection, which may be termed "syphilitic bronchitis (" bronchial irritation depending on syphilis," Stokes), we are occasionally presented with a group of physical signs, accompanied by serious constitutional symptoms (hectic), which, *but for their association with syphilis*, would probably be regarded as indicating a tubercular affection, and one likely to prove rapidly fatal. But if, under such circumstances, there is clear evidence of syphilitic cachexia, our opinion is modified, and accordingly, under treatment suited to the peculiar exigencies of the case, we may find every symptom of pulmonary disease to disappear.

So, likewise, in the case which has furnished these remarks, we observe a group of symptoms, too frequently found to resist the best directed general treatment, but which, owing to their dependence on a specific disease, yield readily and quickly to the appropriate remedies.

The necessity, therefore, of a correct diagnosis, under such circumstances, cannot be too strongly insisted on, as, otherwise, suitable treatment may not be adopted; or, being adopted, without much hope of a successful issue, may not be carried out with the necessary decision and perseverance.

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## COOMBE LYING-IN HOSPITAL.

### *Extracts from the Case Book.*

BY G. H. KIDD, M.D.,

ASSISTANT PHYSICIAN TO THE HOSPITAL.

CASE I.—The following is a case of anteversion of the gravid uterus, causing tedious labour, followed by rheumatism, and ophthalmia in the child, (gonorrhœal?) and is perhaps worthy of a place in the HOSPITAL GAZETTE, more from the immediately good effects following the means used to further the labour, than from its presenting anything either very rare in its occurrence, or new in the treatment.

B. N., a strong country woman, æt. 30, admitted 11th February, 1854; three years married, and now at the end of the ninth month of her second pregnancy. Labour pains commenced on the 10th, at seven, A.M.; the first stage, terminating with complete dilatation of the os, occupied forty-six hours; the second, terminating with birth of child, nine hours and twenty minutes; and the third, thirty-five minutes. Head presentation; delivery by the forceps; male child; milk in the breast before delivery; umbilical cord separated from the child on the sixth day. Dismissed from the hospital on the 15th March.

On admission the os uteri was about the size of a shilling; at five, A.M., on the twelfth, it was fully dilated; but, though the pains were very active, the head made no progress till twelve o'clock, when I saw her. I then found it resting at the brim of the pelvis, and not advancing with the pains, which were forcible. The soft parts were moist and relaxed; pulse, in the interval, eighty-eight; bowels free; bladder empty. The uterus was remarkably prominent, standing nearly horizontally forward (if she were in the erect position.

I placed her on her back, and, while examining for the fœtal heart, which was heard in an unusual position, immediately above the symphisis pubis, the head fairly entered the pelvis. A binder was now put on moderately tight, so as to support the uterus, and she was directed to keep on her back. In less than an hour after she assumed this posture, the head was pressing on the perineum; and the delivery would, no doubt, have been completed by the natural powers, but that the tuber ischii approached each other too closely, and the child was exceedingly large. The head remained at the outlet for an hour, when, constitutional symptoms arising, Dr. Ringland determined on delivery by the forceps.

This was her second child; the first, also a male, was born in the country three years ago, after a four days' labour, and, according to her own account, the use of ergot of rye.

Twenty-two hours after delivery, it is noted that the pulse was ninety-six; uterus large and tender; skin soft; milk in breasts, and lochia sufficient. *The abdominal walls are remarkably thin, and the peristaltic movements of the intestines can be seen through them.*

Anteversion of the gravid uterus, such as existed in this case, is occasionally seen after repeated child-bearing, from great relaxation of the abdominal muscles; and, besides retarding both the dilatation of the os, and the head's entering the brim, has given rise to the suspicion that there was no os uteri, from its being tilted upwards and backwards to the promontory of the sacrum. "Within our knowledge," says Dr. Dewees, "this case has been mistaken for an occlusion of the os uteri, and, upon consultation, it was determined the uterus should be cut to make an artificial opening for the fœtus to pass through. They thought themselves justified in this opinion, first, by no os uteri being discoverable by the most diligent search for it; and, secondly, by the head being about to engage under the arch of the pubes covered by the womb. Accordingly the labia were separated, and the uterine tumour brought into view. An incision was now made by a scalpel through the whole length of the exposed tumour, down to the head of the child. The liquor amnii was evacuated, and in due course of time the artificial opening was dilated sufficiently to give passage to the child. The woman recovered, and, to the disgrace of the accoucheurs who attended her, was delivered *per vias naturales* of several children afterwards, a damning proof that the operation was wantonly performed."

The progress of the case now related was satisfactory to the sixteenth day from delivery. She was kept in the hospital until this time, from the child's having purulent ophthalmia. But she now began to complain of pain in the right arm, which continued, and on the eighteenth day it is noted that the pain was much worse, and that she could not use the arm; it began in the elbow, and extended to the fingers and shoulders. The left arm is beginning to be affected to-day. Tongue clean; bowels confined; appetite impaired; pulse 96; skin soft and perspiring.

Nineteenth day.—Pulse 100. The right elbow is swollen, and slightly reddened. Tongue furred; bowels confined; skin perspiring. These symptoms caused some uneasiness at first, as the hospital had lately been closed, on account of an outbreak of puerperal fever; but the late period at which they occurred, their having preceded the fever, the state of the skin, and absence of rigors, relieved any anxiety that was felt.

The child, on the sixth day, had purulent inflammation of the right eye; the left was soon affected also, terminating with rupture of the cornea, and protrusion of the iris, notwithstanding all treatment. The mother confessed that she had a purulent discharge from the vagina for five months; but denies that it was of a specific nature. If gonorrhœal, it might account for the virulence of the ophthalmia, and the occurrence of the rheumatism.

CASE II.—*Absence of the Areola.*—Mary Byrne, æt. 19, admitted the 22nd November, 1853, at her full time, with her first child; delivered in fifteen hours from the commencement of the pains, of a female child. Milk found in the breast on the second day from delivery. The nipple presented no appearance of an areola; it resembled a virgin breast, of pale pink colour; no enlarged papillæ, no moisture, or emphysematous appearance. The breast was full, and she nursed her child; there were none of the silver lines, or mottled appearances. She was of a fair complexion, light brown hair, and grey eyes.

CASE III.—*Four Nipples.*—Mary Magrath, æt. 23, admitted November 3rd, 1853, having come to the full time, with her third child, and delivered, after a labour of thirty-three hours, of a female infant. The breasts presented on each two nipples; one in the usual position, from which she nursed her child; the other very small, but with a well-marked areola, superiorly and externally, at a distance of two inches and a-half. The formation of these, and the areola, proved them to be nipples, though no milk came from them. There could not be any division of the gland felt, the accessary structures seeming to be nipples merely. There are many cases recorded of supernumerary mammary glands, and the occurrence of such a case as the present may be of interest to the physiologist, as illustrating the mode in which glands are formed, by an involution of the surface; this being, as it were, the first stage in the formation of supernumerary mammary glands.

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## JERVIS-STREET HOSPITAL.

### *Erysipelas; its Clinical History and Treatment.*

BY JAMES S. HUGHES, M.D., F.R.C.S.I.,
EXAMINER IN SURGERY IN THE QUEEN'S UNIVERSITY IN IRELAND.

### PART II.

(*Continued from page* 53.)

Traumatic erysipelas of the scalp divides itself into the superficial and deep-seated. The former generally supervenes on contused wounds, as exemplified in the cases of Byrne, Robertson, and Kelly, and the supervention of erysipelas becomes a serious addition to the danger of the original injury, occasionally causing the death of the patient.

When a person suffering under a wound of the scalp is to be attacked by erysipelas, he will, about the third or fourth day after the infliction of the injury, be seized with a rigor; in rare cases, however, the erysipelas may supervene in twenty-four hours after the receipt of the wound; the rigor in these cases is soon followed by nausea, and sometimes by vomiting; the patient complains of thirst, his pulse becomes quick and hard. If, at this period, we examine the wound of the scalp, we shall find that it has assumed an unhealthy appearance, the dressings are found to adhere to its edges, the scalp in the immediate neighbourhood of the injury pits on pressure. This form of erysipelas, like the idiopathic, possesses a great tendency to spread, frequently, as in Robertson's case, extending to the face, ears, and nose, and a formation of purulent matter may take place in both eyelids. If a case of traumatic erysipelas of the scalp is arrested, we will observe that the inflammation having spread to a particular point, begins to fade at its festooned border, and no longer extends itself; the fever, at the same time, will gradually subside; in this way the amendment will be more visible at each of our visits. In some of these cases the urine may, about this period, be secreted in greater quantity, and deposit, on cooling, as it did in Robertson's case, a copious sediment. If, on the other hand, the attack is to terminate fatally, the inflammation will continue to spread, the fever will increase, the tongue, at first moist and furred, will become shrivelled, brown, dry, and retracted; low delirium now sets in, and the patient not infrequently dies comatose. In this, as in the simple idiopathic form of erysipelas, we are guided in our prognosis more by the increase of the fever and delirium, than by the extent of the local inflammation.

### *Reported by* MR. W. E. LYNCH.

CASE II.—*Traumatic Erysipelas of the Face and Forehead, illustrative of the Advantages resulting from the early Exhibition of an Emetic, followed by Diaphoretics.*—John Byrne, æt.27, a labourer, admitted January 4th, 1853, under Mr. Hughes.

On the evening of the 27th December last the patient, whilst drinking in a tavern, had a dispute with a companion, from whom he received a severe blow of a poker over the right eye, by which a deep wound was inflicted, which bled profusely; he suffered no further inconvenience until last night, when he was seized with a severe rigor, followed by nausea. On admission into hospital this morning, the upper parts of the face and forehead were covered by erysipelatous inflammation of an intensely scarlet colour at the festooned borders; both eyes were closed up, the eyelids being considerably swollen and œdematous; the edges of the wound were dry and unhealthy looking; the dressing adhered to them; he complains of severe headach and pain in his loins; skin hot and dry; tongue white and moist; no epigastric tenderness; pulse quick and full.

℞ Antimonii tartarizat. gr. i.
Pulv. ipecac. gr. xv.
Aq. tepidæ, ℥vi. M.
Fiat haust. statim sumendus.

A light poultice to be applied to the wound; the patient to be placed on low diet.

5th.—The emetic acted immediately after it was taken; the patient is greatly relieved; the redness of the face and forehead and swelling of the eyelids have all greatly diminished; the border of the erysipelatous surface has greatly faded in colour; the patient slept quietly during the greater part of the night; his headach is nearly gone; bowels still confined; pulse softer.

℞ Hydrarg. submuriatis, gr. iij.
Pulv. jalapæ, ℈i.
Mel. q. s. ut fiat bolus.
Statim sumend.

℞ Aq. citratis ammoniæ, ℥ij.
Aq. distillatæ, ℥vss.
Syrupi simplicis, ℥ss. M.
Fiat mistura, cujus capiat coch. mag. duo tertiis horis.

7th.—The erysipelas has quite disappeared; tongue clean; bowels freely opened; pulse soft.

Repetatur mistura ut antea.

8th.—Discharged cured.

### *Reported by* MR. CHARLES WM. RYAN.

CASE III.—*Traumatic Erysipelas of the Head and Face ushered in by low Fever, complicated with Epistaxis and Diarrhœa, successfully treated by Wine and light Nourishment from the Onset.*—Greville Robertson, æt. 40, a tax collector, of intemperate habits, admitted January 1st, 1853, under the care of Mr. Hughes.

Seven days since the patient accidentally fell against one of the posts of his bedstead, by which he sustained a few trifling scratches on the back part of his head, which bled but little; between the second and third day after the accident he was attacked with erysipelas at the seat of injury, which rapidly extended to the right side of the face. On the fourth day he was seized by repeated and violent attacks of bleeding from his nose, and by diarrhœa, which weakened him very much. On admission this day (seven days after the fall), the back part of the head, the forehead, right side of the face, and a portion of the left were covered with erysipelatous inflammation of a dusky livid hue; pulse rapid and compressible; tongue dark brown and dry; the diarrhœa has returned. Ordered—

℞ Misturæ cretæ, ℥viij.
Confectionis aromat. ʒi.
Tinct. kino, ʒij. M.

Capiat cochlearea magna duo post sing. liquidas sedes. Vini rubri, ℥vi. Arrow root. The inflamed parts to be dusted over with finely levigated flour.

2nd Jan.—The patient was suddenly seized with delirium after our morning visit on yesterday, and raved much during last night; he is now constantly muttering to himself; is lying low in the bed on his back, and picking the bedclothes. The erysipelas has extended over the entire of the right side of the face, having kept stationary on the left side and back of the head. Pulse very weak and compressible; tongue dry and brown, and protruded imperfectly and with great difficulty; diarrhœa gone.

Increase the wine to ℥xii. in the twenty-four hours. Ordered bark mixture with ammonia.

3rd Jan.—Patient extremely restless and delirious during the night; the erysipelas has spread; eyelids closed up and œdematous; a large vesication occupies the top of the nose; pulse extremely quick, small, and compressible; tongue black, dry, and more retracted; lips covered with dark sordes; still lying on his back low in the bed.

Ordered a pint of wine. Beef-tea as a drink. Repeat the bark mixture.

4th Jan.—Considerably improved. The erysipelas has not extended; raved less; slept a little; pulse less compressible, not so rapid.

Repeat the wine and mixture.

5th Jan.—A further amendment; raved but little; slept better; inflammation of head and face greatly reduced; tongue becoming clean and moist at its edges; the urine, on cooling, deposits a copious sediment; pulse less frequent and stronger.

Ordered six ounces of brandy, beef-tea, and arrow-root.

The patient from this date gradually improved, and was pronounced convalescent on the 20th of January, suppuration having in the meantime been established in both eyelids, and the matter having been let out by suitable incisions, which healed in without leaving any deformity.

The next form of erysipelas is the phlegmonous; two interesting cases of which are at present under my care in the hospital. This affection, which received the name of diffuse phlegmon from Dupuytren, is distinguished from true erysipelas by its involving the subcutaneous areolar membrane, as well as the skin; by its disposition to terminate in suppuration, and lastly, by its frequently inducing destruction of the skin in a secondary manner. In phlegmonous erysipelas, the colour of the skin assumes a deeper hue than in true erysipelas, as you had an opportunity of observing in the girl Walsh's case, who was admitted into No. 6 Ward, three days since, with phlegmonous erysipelas of the leg; in her case the colour of the affected part was of a dark livid hue, and had a peculiar mottled appearance. Phlegmonous inflammation may attack the skin and areolar membrane of any part of the body; but the extremities, especially the lower, are most frequently the seat of this severe disease. Soon after phlegmonous erysipelas sets in, the limb becomes considerably swollen and tense; the areolar tissue being at first loaded with serum, the integuments pit on the slightest pressure; in the very onset of the attack the patient does not, in general, complain much of heat or pain in the part, but after a lapse of a day or two, if the case is neglected, the pain becomes acute, and in the advanced stage is accompanied by a distressing throbbing sensation. As the disease proceeds, the limb becomes more tense, and no longer pits on pressure. In this stage the cuticle often becomes detached from the true skin, as occurred in M'Namara's case, in No. 1 Ward, forming bullæ or vesicles, filled with a dark turbid fluid. Inflammation of the absorbents and lymphatics, as we lately had opportunities of witnessing, often accompanies phlegmonous inflammation; however, such an occurrence is, by no means, a necessary feature of the disease. As the diseased action progresses in phlegmonous erysipelas, the limb acquires a soft and boggy feel, the fluid first effused into the areolar membrane is of a light serous nature and consistence, but as the disease advances this fluid assumes more of a purulent character; in this form of inflammation the matter is not circumscribed, as in ordinary phlegmon, but becomes diffused throughout the areolar tissue of the limb. Phlegmonous, like true erysipelas, has consequently a great tendency to spread. The areolar membrane in phlegmonous erysipelas becomes destroyed, being converted, in the course of ten or twelve days, into a slough of a greyish white colour. In a still more advanced stage, the integuments, having lost their vitality, are now, in different parts, converted into small dark patches. In extreme cases, the greater portion of the areolar tissue of the limb may be lost; the muscles being dissected and laid bare, the tendons may, in the same way, become detached; and in some extremely neglected or improperly treated cases (more especially when the result of a compound fracture), the joints may be opened, and their texture completely destroyed. Phlegmonous erysipelas is always accompanied by a considerable amount of fever; in the early stage the pulse may, as in simple erysipelas, be hard and full; afterwards, however, as the disease advances, it usually becomes quick and feeble; delirium and subsultus may set in, vomiting and diarrhœa not infrequently ensue, the delirium may, at this stage, increase, and under such circumstances, the patient soon becomes comatose, in which condition he dies. In some of these cases death is preceded by inflammation of the organs within either the head, chest, or abdomen, or, as occurred in the case of M'Geogh, lately under the care of Mr. Stapleton, pus may be formed in many of the joints, and, as in his case, within the pericardium.

In peculiar conditions of the constitution, phlegmonous erysipelas may be accompanied by traumatic delirium; or, as in M'Namara's case at present, in No. 1 Ward, by well-marked delirium tremens, such complications, of course, add considerably to the danger of the patient.

If a case of phlegmonous erysipelas is to recover, the sloughs are thrown off, granulations spring up, and the ulcers heal; but in the extreme cases, which I have endeavoured to describe to you, where the limb has suffered extensively, the joints being disorganized, nothing short of amputation will save the patient's life, for otherwise he will sink under the profuse discharge, and constitutional disturbance.

Phlegmonous erysipelas is generally the result of an injury such as a severe contused, lacerated, or punctured wound, or it may follow a compound fracture. In M'Namara's case, the disease supervened on a contused and lacerated wound; in Walsh's case, in No. 6 Ward, the exciting cause of the inflammation was a severe kick on the shin. At other times, phlegmonous erysipelas makes its appearance without any very assignable cause. There is a disease which bears considerable resemblance to phlegmonous erysipelas; I allude to diffuse inflammation of the areolar membrane. In true diffuse inflammation the skin does not, at first, in the great majority of cases, partake of the inflammation, and when it does become involved, it is but in a secondary manner. Diffuse inflammation resembles phlegmonous erysipelas in its great tendency to spread, and to terminate in suppuration. Diffuse inflammation not infrequently engages the areolar membrane of an entire limb, and often rapidly extends from one part of the body to another. On *post mortem* examinations of patients who have died of diffuse inflammation, purulent deposits are frequently found in the interior of the pericardium, large joints, &c., &c. Diffuse inflammation sometimes is the result of a wound in dissection; at other times, it is the consequence of the bite of a venomous animal; occasionally it follows on fever.

*Reported by* MR. W. E. LYNCH.

CASE IV.—*Severe Phlegmonous Erysipelas of the Leg, complicated with Delirium Tremens; Recovery.*—Patrick M'Namara, æt. 35, an omnibus-driver, of intemperate habits, admitted into Jervis-street Hospital, 25th December, 1852, under Mr. Harrison.

As the patient was ascending the box of his omnibus his foot slipped, and he fell with violence to the ground; two deep lacerated and contused wounds were inflicted on the leg below the knee by some projecting part of the wheel, whilst he was falling.

On examination, after admission, the leg from the knee downwards was swollen, and the patient was suffering from intense agonizing pain in the seat of injury. Warm lead fomentations were applied to the limb, and the patient was ordered the antimonial mixture.

28th.—The inflammation has greatly extended, the surface of which is œdematous, and pits on pressure; the patient was very delirious during the night, and complains of much pain in the limb. Mr. Harrison made two deep incisions into the leg, by which a quantity of purulent matter was let out; poultices were then applied to the limb, and the patient was ordered—

℞ Mist. Camphoræ, ℥viss.
Aceti opii, ʒi.
Liq. tart. antimonii, ℥i.
Syrupi simplicis, ℥ss. M.
Capiat cochleare magnum omni horâ.
One quart of porter.

29th.—Much relieved by the incisions and treatment. Repeat the mixture and porter.

30th.—Patient less delirious; inflammation extending towards the knee. Mr. Harrison made another incision above the former ones, through which much matter escaped. Ordered—

℞ Mist. camphoræ, ℥iv.
Spirit. ammoniæ arom. ʒij.
Tincturæ opii, gtts. xl.
Syrupi, ʒij. M.
Sumat ℥ss. omni horâ.

January 1st.—Mr. Harrison's period of duty at the hospital having expired, Mr. Hughes took up the case. The patient has been very restless for the last twenty-four hours; he is watchful and suspicious; has been attacked with hallucinations, fancying that all sorts of demons are torturing his injured leg; at other times the associations of his calling are aroused, at which periods he starts up, asks for his whip, and gives directions to imaginary grooms concerning his horses. Pulse weak and quick; tongue very tremulous. Ordered—

℞ Pulv. opii, gr. i.
Ext. humuli, gr. ij.
Fiat pil. 4tâ quaq. horâ sumend.

℞ Decoct. cinchonæ, ℥viij.
Ammoniæ bicarb. ʒi. M.
Capiat unciam tertiâ quaq. horâ.
Brandy, 6 oz. Beef-tea as a drink.

2nd.—Still suffering under hallucinations; profuse discharge from the incisions in the leg; had slight snatches of sleep.

Repeat the medicines, brandy and beef-tea.

4th.—Spent a very restless night; still fancying that he is driving the omnibus; pulse weak and quick; tongue very tremulous, and covered with a white fur.

℞ Acet. morphiæ, gr. ½.
Aq. distillatæ, ʒvi.
Aceti et syrupi āā ʒi.
Fiat haust. 3tiis horis sumend. (si op. sit).

The resident pupils to watch the effects of the draughts, and to omit them if necessary. Brandy and beef-tea as before.

5th.—Much improved; less restlessness; slept for short intervals; hallucinations not so marked. The left instep attacked during the night with swelling, redness, and pain. Ordered—

℞ Acet. morphiæ, gr. i.
Aq. distillatæ, ʒvi.
Aceti et syrupi, āā ʒj. M.
Fiat haust. statim sumend. et repetatur horâ somni (si op. sit).

6th.—Slept soundly throughout the night; the hallucinations are nearly gone; less tremor in the tongue; discharge from leg healthy and less profuse; pulse stronger and less frequent.

Ordered bark mixture in effervescence; brandy and beef-tea.

7th.—Complaining a good deal of pain in the left leg, where a sense of fluctuation can be detected over left ankle, into which an incision was made and a quantity of matter let out. The right leg is also causing him much pain; he is very weak and was bathed in profuse perspiration all night.

Omit the bark mixture.

Ordered 12 drops of black drop immediately, and to be repeated, if necessary, at night.

℞ Sulph. quininæ, ℈i.
Infus. rosæ comp. ℥viii.
St. ℥i. ter in die.

One pint of porter; continue the brandy, and give a chicken for dinner.

8th.—Delirium quite gone, but he is suffering much from pain in the right leg, where granulations are forming extensively; discharge healthy and less profuse.

Ordered six drops of black drop, night and morning; repeat brandy, porter, and chicken.

10th.—Is much improved; pulse stronger; tongue steady, and cleaning; pain in leg abated, but not quite gone.

Repeat the quinine mixture, and give half a grain of the sulphate of morphia three times in the day; lay aside the poultices; dress the leg with lint spread with ung. calaminæ, and apply the many-tailed bandage, so as to gently approximate the edges of the ulcers.

18th.—On this day the limb was placed on Liston's splint, and the use of many-tailed bandage continued. From this date the patient rapidly improved, and was discharged cured on the 1st of March, 1853.

In the third form of erysipelas, or that which has received the name of œdematous, or white erysipelas, the affection is best marked when met with in persons whose state of health has been impaired by organic disease, causing obstruction to the circulation; here the skin is smooth, tense, and glassy, the integuments pit on pressure, and but slowly regain their level when the pressure is withdrawn. Bullæ sometimes form in this variety of erysipelas. The scrotum, labiæ pudendi, and extremities of dropsical persons are the portions of the body in which œdematous erysipelas is most frequently met with; in this disease the patient is seized with pain in the part, the skin assumes a red, tense, shining appearance, after a time the integuments acquire, in different places, a dark, livid, or leaden hue, in which spots sloughs are formed, the pulse becomes quick, wiry, and intermitting; vomiting, and perhaps diarrhœa, now make their appearance, low muttering delirium ensues, and death is the result. This commonly fatal form of erysipelas has often supervened on the operation of acupuncturation of the legs of dropsical persons.

## MEETINGS OF THE PATHOLOGICAL SOCIETY.

*February* 11*th.*

DR. HUTTON IN THE CHAIR.

### *Malignant Tumour in the Apex of the Right Lung, obliterating the Subclavian Vein; Death from Gangrene of Right Arm.*

DR. GORDON said—The subject of the above case was a soldier, æt. 32, who had served for fourteen years, and had been through all the campaign at the Cape of Good Hope. He was admitted into the Whitworth Hospital, November 7th, 1853, with cough, pain in the right side, and profuse expectoration; his face was congested; the lips blue, the respiration frequent, and the circulation very rapid. When the chest was exposed, a varicose condition of the veins in the right humeral region was observed, and the glands in the supra-clavicular region were enlarged. There were the usual physical signs of emphysema and chronic bronchitis of both lungs, with this addition, that the respiratory murmur at the apex of the right lung was much more feeble than either at the corresponding part of the opposite lung, or elsewhere; and the percussion sound was also rather dull in this situation. The patient was ailing for four years before admission. After severe duty and exposure all night, he was attacked with cough, which never left him since, but was not very violent until about four months ago. He has had occasional hæmoptysis, or rather, the expectoration has occasionally been tinged with blood. He remained in hospital for some time, without much alteration in his symptoms, and the nature of the affection of the upper part of the right lung was a matter of daily speculation. The rarity of the combination of phthisis and emphysema did not allow us to look upon it as such without further evidence, and he had no symptom of hectic, except progressive emaciation. The expectoration, although very abundant, was only serous, viscid, and very frothy, never contained any purulent matter, and had no tinge of blood since his admission into hospital; the varicose state of the veins of the right shoulder and enlarged glands pointed rather to the existence of some internal tumour. He was now attacked with pain down the right arm, shooting into the thumb and index finger; and the pulse of the right radial artery became more feeble than the left; no difference, however, could be detected in the pulse of the carotids, nor was there any abnormal sound or impulse, referrible to the circulation, which could tend to establish the diagnosis of an aneurism of the arteria innominata. On the 2nd of January, he was attacked with pain up the right side of the neck, and for the remainder of his life, this pain was the chief source of all his suffering; it was strictly confined to the right side, but extended to the face and head. About this time the nature of the case became obvious; the glands in the supra-clavicular region assumed a stony hardness, and the axillary glands became very much enlarged, hard, and tender, œdema of the right hand and arm set in, and the varicose condition of the veins of the humeral region became greatly increased, and spread over the entire upper extremity and the sternal region, and also upwards over the neck and right side of the face. This accumulation of symptoms clearly indicated that the pressure was owing to the growth of a malignant tumour.

The remainder of this case may be very briefly detailed:—the temperature of the right hand and arm became greatly decreased, while the œdema extended rapidly, and he soon became unable to lift the arm by its own muscular exertion; the anasarcous swelling spread to the right side of the chest, the right side of the face, and neck, and arm, partially to the right lower extremity, so that, for a considerable time before his death, the body presented a most remarkable contrast in the swollen and œdematous condition of the right side, and the emaciated appearance of the left; the parts in which this contrast was most remarkable were the upper extremities, and the intercostal spaces, which were on the right side completely effaced, whilst on the left they were most distinct, and apparently elongated, from the great emaciation over the ribs.

Towards the middle of January purpuric spots began to appear in the œdematous parts; these were rapidly followed by lividity of the right arm, which, at length, became gangrenous, the gangrene appearing in two or three parts at the same time; and, after lingering for several days, he at length died slowly on the 21st of that month.

The anterior part of both lungs presented the ordinary anatomical characters of vesicular emphysema, and the mucous membrane of the bronchial tubes was dark and congested. In the right lung was found a small tumour; it was of a malignant nature—very hard, striated, not larger than a small hen egg; it was confined to the very apex of the lung, but was closely adherent to the cone of the pleura—it was attached to the first rib and clavicle, and had completely obliterated the subclavian vein; even a small bristle could not be passed through it; the axillary and brachial veins were also obliterated, and the veins in the forearm were distended and hard; they contained long, firm coagula, surrounded by dark grumous blood.

The right vena innominata was dragged slightly upwards and to the right side, and the tumour projected into its interior. It contained a quantity of coagulated blood, but could not have received any for some time, except through the left vena innominata: the jugulars on the right side had been completely closed up by hard, firm coagula.

Although the malignant disease was developed to so small an extent in the lungs, it had spread by contamination into the adjacent parts; it was adherent to a firm mass of hardened glandular structure in the supra-clavicular space (the cervical glands being also enlarged and hard), and extended also into the axillary region, and the axillary artery and brachial plexus of nerves passed through this indurated structure; several of the nerves appeared flattened and compressed, and the artery, which so frequently in such cases escapes uninjured, was at the commencement of the brachial greatly compressed, its internal coat very rough, and its calibre diminished for half an inch in extent.

The right side of the heart was enlarged, and there were found in the liver two very small deposits of malignant structure, not larger than peas, but similar to that which existed in the right lung.—(*Museum, Richmond Hospital.*)

### *Phthisis and Fatty Degeneration of the Liver.*

Dr. Law said, the specimen I beg leave to exhibit was taken from a patient aged thirty years, who had been for the last four or five years under observation. It is an example of extensive disorganization of the left lung, with an immense quantity of tubercular development in the right lung; but the remarkable circumstance about the case was an enormous liver, which was first accidentally noticed when she entered Sir P. Dun's Hospital; it extended as low as the pubis, and, during life, the hand could be sunk into the fissure between its two lobes; she had no uneasiness from it, merely complaining of a slight sense of fulness after eating. When the abdomen was opened the liver concealed all the other viscera, and the diaphragm and lungs were pushed up; there was complete disorganization of the left lung, and the upper lobe of the right lung was filled with tubercles, so that the lower lobe of the right was the only available portion. Dr. Law then alluded to the frequency of fatty degeneration of the liver in phthisis; and to the connexion existing between conditions of the lung, in which the respiratory functions are diminished, and fat deposited in the liver; and instanced the fatty liver of the fish as an example of a normal state of health, which, in the higher animals, constitutes a condition of disease.

## SUMMARY.

*Common Salt as a Remedy for Intermittent Fever.*—The employment of chloride of sodium has been advocated for some time in Paris, by M. Piorry and others, as a cheap and effectual remedy in ague. In confirmation of this statement, a long report, addressed by M. Willemin, late sanitory physician in the East, to the Board of Trade of the French capital, concludes by stating the following deductions:—1st. Common salt has well-marked febrifuge properties. 2nd. In Damascus this salt stopped the fever six times out of every seven cases; and even very small doses, as from two to four half-ounce doses in six ounces of water, were in most cases sufficient. 3rd. This therapeutic agent is especially valuable in anæmic individuals, upon whom the marshy influence acts most severely; and the great cheapness of the salt should induce the profession to give their serious attention to its virtue in intermittent fever.

[In the Whitworth Hospital, common salt has been successfully employed by Dr. Banks in the treatment of ague, as recommended by Piorry, for some time past; and, although the disease is rarely met among the inmates of Irish hospitals, the effects have been sufficiently marked, in those cases in which it was administered, to prove the decided power of this remedy in arresting and curing the disease. It would be interesting to inquire whether it possesses any similar influence over those painful intermitting neuralgias, which are not uncommon in many parts of the country, and for which quinine is well known to be a suitable remedy].

*On the Artificial Production of Leeches.*—M. Borne, a grocer of Saint Arnoult, in the department of Seine-et-Oise, appears to have solved the important problem of the artificial production of leeches, so long considered a desideratum in medicine. By studying the habits of the leech, as the Vosgian peasant, Remy, did those of fish, he has succeeded in establishing, near his native place, a regular factory of these animals. His establishment consists of a piece of bog, about two and a-half acres in extent, surrounded by a trench full of water, destined to protect his nursery from enemies of various kinds, of which the leech appears to have many. The half of this area is occupied by a number of basins filled with water, at present amounting to twenty-eight. These basins are usually about six and a-half yards long, nine feet nine inches wide, and about three feet three inches deep. In the centre of this species of island, a hut has been built, in which a superintendant always resides, whose business it is to keep off enemies of all kinds, especially birds, water-rats, and several kinds of insects. M. Borne, having observed that the leeches liked to warm themselves in the sun in winter, and to lie in the shade in summer, accordingly constructed small promontories of earth, one facing the south and the other the north, where they might congregate in each of those seasons. He also found that they deposited their eggs in small galleries, which they formed in the soft earth on the borders of the ponds; these he made himself by forming a number of zig-zag channels reaching to the edge of the water, with his fingers, and covered over with the stiff mud which he removed. The leeches at once occupy these channels, and deposit their eggs, which M. Borne removes from time to time, and places in a small basin by themselves, where the process of hatching is performed. He also discovered a mode of feeding them, which is not the least ingenious part of his invention. He takes a quantity of blood, which he beats with switches to separate the fibrine, which he has found to injure them; he then places a number of leeches in a small flannel bag, which he plunges into the blood, where he leaves them for a certain time, according to their state of health and age. They are afterwards washed with tepid water, and those that have not eaten are carefully separated, to prevent them from preying on the others as soon as their appetite would become developed. It would occupy too much space here to describe the several other ingenious contrivances which he has adopted, and we must, therefore, refer those of our readers who take special interest in the subject to the Report of M. Soubeiran to the French Academy of Medicine.—*From the Monthly Jour. of Indus. Prog. for April.*

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# THE
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## STEEVENS' HOSPITAL.

### *Case of Popliteal Aneurism, cured by Manual Compression.*

BY WILLIAM COLLES, F.R.C.S.I.,

SURGEON TO THE HOSPITAL.

P. DONOHUE, æt. 36, a stout, muscular man, always of temperate habits, obliged to walk constantly, and frequently very quickly during the day.

On the last day of February, returning home from Rathmines, being anxious to reach home speedily, he ran down the road for about ten perches, when he was seized with a sudden cramp in his left knee and leg; after resting a few minutes he was enabled to proceed home, and felt no inconvenience until March 2nd, while standing in the office, his left leg resting on a chair, he was again seized with numbness and stiffness; this increased so much on his going of a message to the north-wall, attended with pain down the leg and to the great toe, that he was obliged to return home; he fomented the leg, and then first thought he felt a *puff* in the ham and calf of the leg. Finding himself incapacitated from attending his business, he applied at the Hospital, and was admitted on the 6th March.

A large diffused tumour can be felt in the popliteal space, extending down the calf of the leg, which is much larger and fuller than the opposite. On laying the fingers lightly on it, an evident motion is perceptible, synchronous with the pulse; on making firmer pressure, a decided and strong pulsation can be felt in every portion of the tumour, presenting a surface of about three inches in diameter, evidently situated deep under the gastrocnemius muscle; it does not so much occupy the popliteal space as is generally observed; integument not altered in colour. On applying the stethoscope, a loud bruit is heard all through; on pressing the artery, the bruit and pulsation cease, the tumour becomes relaxed and compressible; and, on removing the pressure, bruit and pulsation return. He complains of some pain in the tumour, but suffers especially from a pain in the sole of the foot, behind the toes; there is little or no œdema of the leg and foot. Ordered to keep perfectly quiet, and apply cold lotion.

8th. Evening.—Went to the closet, and on returning to bed was seized with violent pain in the leg, and especially the toes; pressure with the fingers on the femoral artery relieved this, and, by the aid of an opiate, he rested well; but from this time he always suffered the pain more at night.

15th.—He was moved to a separate ward, in order to ensure perfect quiet, and also for the convenience of the pupils appointed to attend the application of pressure. On this evening he was seized with most severe pain in the foot, causing him to roar out, and he could with difficulty be held in the bed. He got rest after a very full opiate; the next day he said he did not think he could survive another night of such suffering: the pain had at this time very much subsided. Ordered to have a light roller applied from the toes up over the tumour.

17th.—On coming this morning to commence the pressure, I found the tumour had become solid, no pulsation or bruit to be felt in any part of it, except a small line on the outer edge of it, evidently a separate artery. On closely interrogating him, I found that having obtained relief on the 8th from pressure on the artery, he kept up the pressure himself with his fingers, as constantly as he could, since that period, for the space of a week.

Since this period the tumour has become more solid, defined, and smaller; there is still considerable numbness in the leg and foot.

This case presents peculiarities:—First, as to the situation of the tumour, being lower down than popliteal aneurisms generally are found, yet not beneath the deep fascia of the leg, as it would have been in aneurism of the posterior tibial artery; and the sudden origin, the size of the tumour, the extent of its pulsations, and its undefined border, show it to have been a case of diffused aneurism, arising without external injury, probably from over-strained muscular exertion. The general muscular appearance, and uniform good health enjoyed by the man, led us to hope the artery was not much diseased, and that it was a favourable case where the treatment by pressure might be adopted with every prospect of speedy success; however, we resolved not to commence the pressure till we had all arrangements as to attending pupils made, and all instruments requisite, in perfect order, which caused me to defer the application of the pressure until the morning of the 17th, when, everything being arranged to commence the treatment, we found all pulsation had ceased.

The favourable termination of this case was quite unexpected by me, indeed so far from it, that the sudden and great increase of pain induced me to dread some sudden increase of the disease, forgetting that in every case recorded of cure by pressure, the cessation of pulsation was always preceded by this increase of pain. Had I known that pressure had been used, I might have judged differently; but it was only by chance I learned that, finding relief from pain by pressing on the artery on the 8th, the patient had adopted it himself up to the 15th, by means of his fingers, thus, without any knowledge of the treatment intended, or of the nature of his ailment, adopting a process with the sole object of relieving pain, which was quite effectual in curing his disease. He had been using pressure, though not continued, yet very constant, and though, perhaps, not so expeditious, yet certainly not so harassing, and much less painful than the best contrived instrument could have been.

This case very fully illustrates the great efficacy of pressure applied on the trunk of the artery; it also shows that this pressure need not be so strong or continued as is imagined, and it is useful in rendering the treatment by pressure safe and efficacious, as it has been proved to be more simple, and devoid of that increased pain which the application of instruments causes: while it mitigates the pain attending on the existence of the disease, it promotes the cure; it further strongly shows the great impropriety of a surgeon rushing at once to the last resort of the operation, painful and hazardous as it is, till all the means of treatment by pressure have failed, for every cure by pressure is an argument against operation, lessening the proportion of cases in which the knife is necessary.

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## RICHMOND HOSPITAL.

### *Lectures on Diseases of the Anus and Rectum.*

BY JOHN HAMILTON,

SURGEON TO THE HOSPITAL.

### *Fissure of the Anus.*

*Case reported by* Mr. Lloyd.

Arthur Brown, æt. 32, a thin, delicate-looking man, subject to epileptic fits. Nine years ago, while taking mercury for syphilis, thinks he caught cold, and became affected with great pain at the anus and surrounding parts. He was leeched and got medicine, and the pain left him. It appears to have been an acute attack of piles. He had a second attack a year after, and noticed subsequently a small tumour at the anus, at stool, constantly from that time, with occasional bleeding. The prolapsus is now large. In addition to this he has latterly experienced the most excruciating pain in the anus when passing a motion, and for seven or eight hours afterwards.

The anus appears lax, and surrounded by loose, wrinkled folds of integument, hanging like a fringe round the anus. At the right side, rather near the coccyx, a fissure can be seen, the surface red, the raised ragged edges rather white. Without the speculum only a small part of the fissure can be seen, but with it an oval ulcer is apparent.

January 17th.—The operation for fissure of the anus was this morning performed by Mr. Hamilton. A speculum was introduced into the rectum, and an incision made through the ulcer, beginning a little above its upper edge, carried through its base, and a little below the lower edge; there was very little bleeding, and a piece of lint was inserted into the wound.

January 27th (the tenth day).—He was discharged well, the wound cicatrized, no uneasiness at the anus, and no prolapsus, the one operation having cured both the fissure and the prolapsing piles.

Fissures of the anus, as they are called, are in reality narrow oval ulcers at the margin of the anus and within it, which assume the appearance of fissures in consequence of the vertically plicated arrangement of the termination of the rectum. They generally cause the most excruciating sufferings, and after long continuance reduce the patient to a state of extreme nervous irritability. He feels uneasiness, and a sense of weight for some time previous to a motion, but the great pain is felt during the passage of the fæces, which, when they are hard and large, is dreadful. The fear of this suffering constantly causes the patient to delay for days together going to stool. But nearly as much pain is endured after the motion, continuing for some time, the period varying in different cases. In some there will be two or three hours of great suffering, in others six or seven. I have even known it last sixteen and twenty hours, till the patient was completely exhausted. The patient frequently applies to opium for relief. I operated on a gentleman who had suffered from a fissure of the anus for near three years. The pain was so acute that he was quite disqualified for the duties of his profession. To lull the pain he resorted to laudanum; the dose he gradually increased to an ounce in the day, which, though it gave him ease, was followed by all the ordinary bad effects of opium in large doses, inaptitude for exertion, occasional confusion of ideas, and deranged digestion. Some find temporary alleviation from the application of a sponge dipped in hot water, and to others cold is more grateful. I remember a farmer who came from the country to be operated on by Sir P. Crampton, who, maddened by the pain after a motion, got up from bed in the middle of the night and rushed into the street.

Those who suffer much or long from fissure get into the habit of evacuating the bowels in the evening, that they may go to bed immediately after, as the duration of the pain during the day disqualifies them for business. Of course every one does not suffer in the same degree; fissures apparently similar offer striking differences in this respect.

It is happily a very manageable affection, as I shall show you by the recital of a few cases, which will convey, at the same time, a knowledge of the symptoms and varieties of the disease.

In very recent and slight cases, where the fissure is just at the margin of the anus, scarcely going within it, you will succeed in healing them by touching the fissure with a strong solution of the nitrate of silver, a drachm to the ounce of distilled water, or by very light touches with the solid caustic, and by keeping a small shred of dry lint well in the fissure; the last is a very essential part of the treatment, and you should make your patient come to you daily after the morning motion is past. The solution of the nitrate should be applied every second day; if the solid is used, not oftener than every third day. The bowels, at the same time, kept relaxed by a few grains of powdered rhubarb and blue pill at bed-time, or a couple of teaspoonsful of the lenitive electuary. The following is a case of the mild form of the disease:—

Mr. H. P. came to me, May 31, 1850, with a small fissure at the coccygeal side of the anus, readily visible by separating the sides of the anus; it was red on the surface, but did not go high up on the inside; not very painful at stool, bleeding a little each time. He had had it only a few days, and thinks it came on from his having been frightened at stool when the passage of the fæces was suddenly arrested. They were so hard next day that the fissure took place. I touched it with the nitrate of silver, and put a little piece of dry lint into it. On the third day a second application was made, and a gentle laxative ordered.

June 11.—He passes motions well and without pain.

But if you have a well-marked fissure of any standing, it would be perfectly useless to try the application of caustic, which, while in such cases it gives the most intolerable pain, often lasting the whole day after, seems to exercise no influence whatever on the fissure. The established treatment is, to make an incision through the whole length of the centre of the ulcer. We owe this most effectual plan of cure to Boyer. His idea was, that the obstinate resistance of the ulcer was mainly due to the action of the internal sphincter, and if this was overcome, the fissure would heal. He, therefore, made a cut through the centre of the ulcer, deep enough to divide the fibres of the internal sphincter, and the successful result seemed to justify his theory. I believe, however, you will find that the division of the sphincter is not necessary to the cure; all that is requisite is an incision deep enough to go through the base of the ulcer. I was led to this conclusion by the fact, that fissure is most common at the coccygeal end of the anus, where there are no muscular fibres at all, and yet the operation is as successful as when the fissure is at the side where the muscular fibres abound. In this respect I fully agree with Mr. Syme. Mr. Curling, I find, still advises the division of the sphincter.

Mr. R. S., after an attack of ague, about a month since, during which he took much quinine, had a hard motion which hurt him. Since then he has suffered much pain at stool, and dreaded having a motion. He used to throw up a little tepid water to soften it. I found a small red fissure, or ulcer, running up the inside of the anus for about half an inch at the coccygeal end; its surface smooth and ungranular; the membrane next it a little swollen and red, and formed a slight projection at the outer part, so as to lead at once to the seat of the disease. He has observed blood at stool.

January 13, 1851.—I introduced a speculum ani, so as to expose at once the whole extent of the fissure, and made an incision through it, not very deep, with a sharp bistoury. It bled smartly for an instant, but stopped directly a little lint was put into the cut.

14th.—Pretty easy since; no motion from the bowels; the lint tight in, so I left it alone. Fearing he might have a costive motion to-morrow, I ordered five grains of rhubarb and five of blue pill at bed-time, and a little warm water to be thrown up after breakfast; the anus to be anointed with zinc cold cream prior to passing the motion.

15th.—In spite of these means the motion he passed was not soft, and gave him pain, and he suffered great pain till nine o'clock in the evening, when it went off without any apparent cause.

16th.—Pretty much as yesterday; pain on passing a motion; smart bleeding, and the part very sensitive. After cleaning out the fissure I put in a piece of lint dipped in oil; unpleasant at first, it afterwards felt easy.

The lenitive electuary.

17th.—Still a bad day from pain, which went off in the evening. The electuary acted well.

18th, 19th, 20th.—Quite easy, passing soft motions with scarcely a feeling of pain; sometimes forgets the fissure, which looks healthy. He goes about as usual; sitting on a hard chair alone reminds him of the complaint.

23rd (eleventh day).—Well; no uneasiness for the last two days, and I can detect no fissure.

You must not think that matters will always go on so smoothly, or that the mere division of the fissure will be sufficient. If you were guided by some authors who have written on this subject, you would be misled in thinking there was nothing further to do. Even in uncomplicated cases, about the third day after the operation, the part begins to get very sensitive and painful, as in the above instance, and will continue so till the surface of the divided ulcer becomes granular, when all pain ceases, and cicatrization rapidly ensues. In other cases the pain does not materially diminish; though less, perhaps, than before the operation, the surface of the ulcer is unhealthy, greenish-yellow, and the surrounding inflammation too great. You see there is something faulty in the constitution acting on the local complaint, and it is through the constitution you must act on the local disease. The tongue is loaded with yellow, the complexion is sallow; I know nothing better than slight mercurialization; two grains of blue pill, two of powdered rhubarb, with a little extract of taraxacum, three times a-day, till the gums are slightly touched. Let me instance this by a case taken by Mr. Stewart.

James Whelan, ætat. 49, admitted into the Richmond Hospital, October 29th, 1849. After going to stool, he suffers extremely for six or eight hours from intolerable scalding pain in the rectum, accompanied by frequent desire to go to stool; and a discharge of a thin fluid. At times, the pain has lasted from sixteen to twenty hours. On examination, an oval ulcer the size of a shilling was discovered on the posterior aspect of the anus, extending from without, above the level of the internal sphincter.

About two months before admission, after a motion, he felt uneasiness at the anus, it increased to soreness, and finally to the severe pain he at present feels. The pain sometimes begins immediately after stool, at other times half an hour will elapse. He never passed any blood, but there is a constant oozing of thin matter.

November 3rd.—The pain from the introduction of the speculum was so great, that Mr. Hamilton ordered a starch and laudanum injection, which rendered the passing of it much easier—with a sharp bistoury he incised the whole extent of the ulcer. A piece of dry lint was inserted into it.

I found the progress of this ulcer very slow, and the man being evidently out of health, with a yellow loaded tongue, I gave him two grains of blue pill, with extract of taraxacum, three times a day. This had a very good effect, as the following reports show; the first before, the second after, the action of the mercury became manifest.

14th (the eleventh day).—Had a stool to day; pain as bad as before the operation, scalding and intolerable; it lasted sixteen hours, and after the motion there was a copious flow of thin matter.

16th (the thirteenth day).—Mouth beginning to be touched. The pain after stool is much diminished, the ulcer healing fast.

19th (the sixteenth day).—Had two stools without any pain. Discharged well.

A little redness and irregularity of surface was all that the speculum showed of the former ulcer. I saw him a month after in excellent health.

I operated on an army medical officer for fissure of two and a half years' standing. He had served a long time in India, and had further deranged the hepatic secretion by large doses of laudanum, taken to allay the pain. The fissure extended high up at the sacral end of the anus, the surface red and irritable, the edges raised and hard. On the third day after the operation, severe pain began, and continued for several days as bad as before, and showed no sign of diminishing, the surface of the ulcer looking greenish and foul. I gave three grains of grey powder, and one of aromatic confection, three times daily, till slight salivation, when the ulcer ceased to be painful. Its healing was slower than usual.

The lower end of the fissure is often marked, externally, by a soft red raised papilla, but in consequence of the spasmodic closure of the anus, only a small portion of the passage can be seen without the aid of a speculum. The introduction is necessarily very painful. It cannot be done too gently, or slowly; and the speculum should be pressed to the side of the anus opposite to the fissure, as it is passed in. It ought to be warmed and smeared, as well as the anus, with plenty of oil. The best speculum is the conical grooved one, long in use in Dublin, and which has been lately recommended by Mr. Curling. I like an instrument with a smaller and more conical termination than that delineated in Mr. Curling's work. Sometimes there is no external evidence of the fissure, the anus looking quite healthy, though more tightly contracted than usual. The finger introduced often detects the seat of the ulcer, by the greater induration and sensitiveness, at a particular part, and is a good precursor of the speculum, which has not then to be painfully turned round and round in search of the ulcer. The patient's feeling is not always a certain guide to its position; the pain being often greatly diffused about the anus, perineum, and sacrum, and even into the penis and testes. In a large proportion of cases you will find the fissure at the sacral end of the anus. Women are said to be more subject to it than men; such is not my experience.

The fissure is not always the only disease of the rectum at the same time; it is occasionally accompanied by piles, as in Brown's case; sometimes by *fistula in ano*; and it becomes difficult to say which should be treated first. Generally, the other diseases being first attended to and removed, the fissure heals; but there are exceptions. In Brown's case you have seen the prolapsing piles were cured by the operation first performed on the fissure.

I had a troublesome case in No. 9 Ward; a young man of the name of John Lenehan, who had a fissure within the anus, at the coccygeal end, prolapsing piles, and a paralytic state of the rectum, a motion being only passed once a fortnight. The spinal affection which caused this last, led also to frequent retentions of urine, requiring the catheter. I cured the fissure by division, as usual, but found the greatest difficulty in managing the bowels.

A man of the name of Foran, in No. 5 Ward, on whom I also operated successfully, and whose case was one of unusual difficulty, had the troublesome complication of a rectum crowded with ascarides. A little prolapsus of the bowel is very common: but a much more troublesome attendant is intense itching at the anus; it is, in fact, a more distressing symptom than you might suppose. An indurated state of the anus, like psoriasis, the cause of the itching, is also sometimes the primary cause of the fissure.

### *Fissure of the Anus from Syphilis.*

Besides the fissure such as I have described, which may be called idiopathic, you will meet with fissures of syphilitic origin, partly within and partly without the anus. They are either primary or secondary. At present there is a young woman in No. 13 Ward, admitted with numerous chancres on the inside of the labia and at the fourchette; she complained of dreadful pain when she passed a motion, and I found the cause to be two rather large chancres, partly without, but chiefly within the anus. I have seen many such cases; they are most common in women at the perineal end of the anus, and clearly traceable, as in the present case, to the discharge flowing from chancres at the inside of the labia and fourchette. These, as well as the secondary fissures, require no operation for their cure, though some of the French surgeons recommend their division.

They yield, with other syphilitic symptoms, to the action of mercury, and require very little local treatment, except the continued application of black wash.

A man was admitted into No. 1 Ward, February, 1851. He complained of very great pain at the anus, particularly at and after stool, so that he dreaded to pass a motion. I found a fissure at the coccygeal end of the anus, of a fiery red colour, about half an inch within the anus; but the anus itself was soddened and white, having the appearance peculiar to condylomata, though there were none. It looked so syphilitic that I examined further, and found some small condylomatous ulcers on the inferior part of the penis, next the scrotum; a chancre at the frenum, in the granular stage, and healing. In the throat a slight white raised ulcer, at the left anterior arch of the palate. A mottled eruption over the belly and loins.

I gave him five grains of blue pill three times a-day, with black wash to the anus and penis. His mouth became sore; the fissure and the other sores healed up rapidly, and on the tenth day he left hospital well of all his symptoms; but he was desired to continue blue pill night and morning for three weeks longer.

About the same time a very similar case was admitted, with condylomata on the scrotum and under part of the penis, phymosis from sores at the orifice of the prepuce, a soddened appearance of the anus, with a red ulcer or fissure at the perineal end of the anus, and going high up within it, a condylomatous ulcer in the right axilla, a white ulceration of the throat, and a mottled or roseolous eruption over the body. He left hospital well of all these symptoms (except the phymosis), after having been brought under the influence of mercury.

Finally, ulcers form at the lower end of the rectum, *above* the sphincter. They are often excessively hard of diagnosis, as they present the characters of dysentery, straining at stool, with frequent mucous, bloody, and purulent evacuations; less painful than fissure, they tell more against the general health. They do not require generally to be cut through, as they yield to the application of caustic.

At present there is a man in No. 5 Ward, who had this complaint, and who, I am happy to say, is, contrary to my expectations, getting much better. He was greatly emaciated on admission, and suffered from frequent passing of bloody mucous stools, with always a quantity of pure pus of a yellowish brown colour. He had a feeling of heat and soreness just within the anus, and the finger could detect the hard irregular surface and depressions of several ulcers, some of which could be seen by the speculum, but with great difficulty. By attention to his general health, particularly the administration of large quantities of quinine, for ague, which he had in an irregular form, he gained flesh and strength, but very slowly, till the ulcers were improved by the daily injection of two ounces of solution of the nitrate of silver, ten grains to the ounce. Injections of acetate of lead, and of sulphate of zinc, previously tried, made him worse; but the nitrate of silver, after a few days, caused a marked change for the better in his uneasy sensations and the characters of the stools.

Dr. Swettenham, of the 44th Regt., brought to me an officer about thirty-six years of age, whose health appeared much broken down. He complained of uneasiness about the anus every time he went to stool, and, if the motion was hard, there was blood, and the fæcal mass at all times was surrounded by yellow mucus. At different periods there was a disposition to diarrhœa, but very seldom, the usual tendency being to constipation. The motion is not smaller than usual; never in pipes or small round pieces; but he thinks he has observed it to be flattened at times.

In Ceylon he had a very bad attack of dysentery, and his recovery was so imperfect, that sick leave was granted, and he returned to England, and left the army, thinking he would never be fit for service again. He got much better; but two or three months before I saw him, he became affected with his present symptoms, and was treated for stricture, with bougies. Their use was extremely painful, and he latterly has got worse.

I passed up my finger to ascertain if there was stricture of the rectum, but could detect none. The finger gave such pain, that I could not examine far up; but with the speculum, I clearly distinguished an oval ulcer at the left side, just within the anus, scarcely above the internal sphincter, resting on its upper half. It was larger than a sixpence, the edges raised, the surface red, and very sensitive. I touched it decidedly with solid nitrate of silver, which gave much pain.

As his tongue was loaded, and he had a jaundiced tinge, I thought a gentle mercurial alterative would act beneficially through the constitution on the local disease. I ordered two grains of blue pill, and of powdered columba, with one of Dover's powder, three times a day. Ten days after he was much better; very little pain, and very little matter observed in the stools.

The next examination with the speculum gave less pain, and the ulcer was seen to be smaller and more healthy. It was again touched with the solid nitrate of silver, with less suffering than before.

I examined him twice after this; the first time, I could scarcely make out the remains of the ulcer; the second time, he appeared well. Since then (now two years) he has enjoyed perfect health.

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## FRACTURE OF THE SIXTH CERVICAL VERTEBRA, WITH DISLOCATION FORWARDS, AND ROTATION TO FULLY THE EXTENT OF 12°. OF THE PROMINENS AND WHOLE CERVICAL COLUMN, COMPLICATED WITH EFFUSION OF BLOOD WITHIN THE VERTEBRAL CANAL; DEATH WITHIN THIRTY-SIX HOURS.

BY DILLON KELLY, M.R.C.S.I., MULLINGAR.

*Inquest at Wooddown, March 22nd,* 1854.

*Examination twenty-eight hours after death.*—face placid; pupils normal; forehead, cheeks, and chest anteriorly the seats of patchy cadaveric lividity; back, sides of the thorax, and thighs of sugillation, varying from deep purple on the back and sides, to intense blue blackness on the sides of the thighs, the intensity most fully pronounced over the sites of the insertions of the tensores vaginæ femorum.

Neck convex anteriorly; head drawn backwards, and slightly turned towards the right shoulder, these positions being most perceptible when the subject was turned on his face, and his head allowed to hang over the end of the table. Abdomen full but not tense, penis large from congestion; glans, prepuce, and extreme third light pinkish red, as if priapism had existed; arms slightly flexed; fingers bent; cadaveric rigidity.

On turning him on his face, the compression of his chest, in forcing the air from his distended lungs, produced some rather loud, moan-like sounds, which at once put my two assistants, firm believers in the "fairy stroke," to the right about.

Posteriorly the sugillation was continuous, but not so intensely black as on the sides of the thighs, and superiorly a sulcus, extending from the third dorsal spine to the atlas, marked the line of the spinous processes of the upper dorsal and cervical vertebræ.

Running my finger along this hollow, the spines of the cervical vertebræ were twisted one side the line of the dorsal spines to fully the extent of three lines, and, in addition, the prominens was fully three lines beneath its normal position.

On cutting down to the spinous processes, immediately over the site of the injury, the second incision was followed by a gush of dark petroleous looking blood, welling out apparently from beneath the roots of the spinous processes, but, in reality, from the intensely congested dorso-spinal veins, and it continued to flow till fully five or six ounces came away.

Having reflected the muscular flaps on each side, and laid bare the laminæ and transverse processes of the three upper dorsal, and four lower cervical vertebræ, the spine of the prominens was deeper by nearly two lines than the spine of the first dorsal, and it was twisted to the left to the extent of at least 12°.

The laminæ of the sixth cervical were fractured, but kept perfectly *in situ* by the ligamenta subflava; and, on cutting into the spinal canal, between the third and fourth cervical, a gush of dark, tarry-looking blood, to fully the extent of two ounces, welled from the vertebral canal, and, in addition, the supra and interspinous ligaments were torn between the fifth cervical and first dorsal spines.

Introducing my finger beneath the vertebræ in front, the body of the seventh cervical was fully three lines farther forward than the body of the first dorsal, the bodies of the remaining cervical being in the same vertical plane with that of the seventh.

This state of parts showed that considerable antero-posterior lessening of the spinal canal must have taken place at the site of the dislocation, thus producing an amount of pressure on the cord sufficient to induce the paralysis, and that rupture of the medulli-spinal veins, and consequent effusion of blood into the vertebral canal, were superadded to the fracture and dislocation.

The history of this interesting case, so far as I could make it out, was this:—

Michael Walsh, æt. about 25, the unfortunate subject of the accident, had drank very freely in the morning, and, after partially recovering from a fit of intoxication, and eaten his dinner, went to a foot-ball in the evening.

These meetings always conclude with wrestling matches; and he, having been thrown two consecutive falls, should have another trial, and had got his adversary on his hip, when, in attempting "to draw him," he fell forwards, and partly sideways on his face, his head doubling under him, and his adversary falling heavily on him in that position.

Not getting up at once, "the ring" supposed he was shamming, and laughed at him, but on some one attempting to lift him, he was found to be totally incapable of making any exertion, in fact powerless.

It was then perceived that his respiration was abdominal, "gasping, with heaving of the belly," being the expressions made use of by my informant, that complete paralysis of both upper and lower extremities had taken place, he repeatedly asking what had become of his arms and legs, which, at the same time, together with his head, were so excessively sensitive, that the slightest touch was productive of intense agony. Having removed him with much difficulty to a cabin in the neighbourhood, one being obliged to hold his head all the way, he incessantly calling out "oh, my head! my poor head! the back of my head is broken in, for I can feel the bones cringing," they were again compelled to bring him into the open air till they got the refusal of a more airy house for his reception.

During the night he complained much of thirst, and drank freely of whey, but I could not ascertain whether or not he parted with any water, or had any desire from the time of the accident.

He lived about thirty-four hours; his intellect remaining unimpaired to the last moment; and, about fifteen minutes before his death, asked for and eat with a relish a little bread and milk, preparatory to his removal to the infirmary, on the way to which he died, his death being, in all probability, hastened by the shaking of the cart in which he was placed: in fact he had not gone more than forty perches when he requested the cart to be stopped, desired his father to pray for him, and died without a struggle.

The accident having occurred in "a fort," "fairy struck" was at once the verdict of his companions, and I believe a fairy man was actually sent for.

My informant, however, was no ways sceptical on that point, and observed, in reply to some remarks of mine, that "the little gentlemen" were "first-rate wrestlers," and, from time immemorial, made use of "forts" and "fairy rings" as the theatres of their gymnastic and saltatory achievements, and further added, with a peculiarly knowing look, that they must have felt deeply offended at their play-ground being so unceremoniously taken possession of, and thus gave a fearful intimation not only of their displeasure, but also of their determination that any further interference with them would be punished with similar, if not greater severity.

In conclusion, the chief merit of the foregoing case consists in its being another example of a lesion, till very lately supposed to be impossible by some of the highest names in the profession. In a medico-legal point of view it may be also of some interest, as showing how trifling an accident may be at times productive of the most grave and fatal results. The attached history of the superstition of the accident, too, is curious, and may be novel to a portion of our readers.

## CASES OF ORBITAL TUMOURS.

BY MR. SHINKWIN,

LECTURER ON PRACTICAL ANATOMY, CORK SCHOOL OF MEDICINE, ETC.

When house-surgeon at the North Infirmary, of this city, I published a report of three cases of orbital tumours, which had been treated in that hospital;* and in a remark appended to the report, stated that the *left* orbit is more generally the seat of disease requiring extirpation than the right. Through the kindness of my friend, Dr. Gregg (one of the surgeons of the South Infirmary), I am enabled to place a report of two additional cases before the profession, in which extirpation of the contents of the orbit was performed, with very great success; the tumour, in one case, occupying the *left*, in the other, the right orbital cavity.

Case I.—*Fibrous Tumour of the Left Orbit; Extirpation of Globe; Recovery.*—M. L——, aged 30, of a thin, spare habit of body, but not otherwise unhealthy-looking, admitted to hospital May 1st, 1853, with a tumour of considerable size occupying the left orbit.

*History.*—States that about twelve months ago she was attacked with acute inflammation of both eyes, which we suspect to have been purulent ophthalmia, as there was a great deal of it in the city about that period; she recovered in four or five months from this attack; the left eye never perfectly regained its strength, and gradually became a source of torment, by excessive lachrymation, more especially when exposed to strong sunlight. About two months and a-half before her admission into hospital, the sight of the left eye began to get so weak, that she could scarcely perceive any object with it, and in a short time after, she was attacked with such violent pain in the eye, that she applied for relief to some of the medical institutions of the city, where she was bled, blistered, and profusely salivated, under which treatment the pain subsided, but there was no improvement in the sight. Four weeks after the attack of the pain, she began to notice the eye protruding between the lids, which protrusion has been increasing very rapidly in size up to the date of her admission.

*Present State.*—There is a large, red, fleshy-looking tumour occupying the left orbit, protruding between the lids, and covering a great portion of the cheek; the superior lid is greatly swollen and œdematous; the lower lid completely everted, with some small spots of ulceration on it, which can only be perceived when the tumour is lifted up. By elevating the upper lid, the original position of the cornea can be seen, marked by a depression about the size of a three-penny piece. She has had no pain in either head or eye since she was salivated.

On admission, emollient poultices were applied to the eye, and she was placed under a slight alterative course, which seemed not to have any effect, as the tumour increased very rapidly in dimensions. She began again to complain of pain, to spend restless nights, and her general health became so impaired, that it was thought advisable to perform the operation of extirpation, which was done on the tenth day from the date of her being admitted to hospital.

The hæmorrhage was very trifling, a few plugs of lint were placed in the orbital cavity, and the part lightly bandaged; and so slight was the shock, that she was able to walk from the operation room to her ward. On the third day from the operation, the plugs of lint were removed; both lids were natural; she complains of no pain, and the right eye, which was getting quite vascular and irritable, is now perfectly healthy. In fourteen days from the date of operation, she left hospital quite recovered.

We have seen this patient within the last three or four days, and she is enjoying perfect health.

Case II.—*Melanotic Tumour of Right Orbit; Extirpation; Recovery.*—G—— F——, aged 50, farmer, originally of a full, strong habit of body, but has lost flesh within the last three months; admitted to hospital, June 20th, 1853, with a tumour, occupying the right orbit.

*History.*—States that about two years ago, he was attacked with an inflammation of both eyes, from which he recovered, with opacity of the right cornea. Six months ago, he was again attacked with acute inflammation of the right eye, which was never perfectly cured; and two months before admission to hospital, the eye began to protrude between the lids, and the pain was so violent, both in the eye and head, that he could rest neither day nor night.

*Present State.*—There is a dark-looking tumour filling up the right orbit, protruding between the lids, and encroaching on the side of the nose, which is ulcerated from its pressure. He experiences no pain on manipulation of the tumour. Its shape differs from the other morbid growths which we have seen occupying this portion of the body, inasmuch as they presented a flat surface, with thin edges; but in this case, the surface between the lids was convex, and left an impression on the mind, that there was some morbid growth pushing the mass directly out of the orbital cavity. He was questioned very closely as to whether he ever had an attack of syphilis, but says not; but that, some six or eight years ago, he had a gonorrhœa.

On admission, he was put under much the same plan of treatment as Case I., with this difference, that he was obliged to take large opiates each night, to relieve the pain, which he said was principally seated deep in the eye, and around the brows. As there was some feeling of deep-seated matter in the tumour, it was deemed advisable to make an exploratory incision, which was done on the 28th; a little dark matter came from the opening, but without any relief to the patient's sufferings. After the incision, the tumour appeared to increase in size more rapidly than before, and the pain became so severe and constant, that his opiates were obliged to be increased, and he himself begged to have something done to relieve him from the pain. Four days from the date of the incision, the operation of extirpation was performed by Dr. Gregg; the hæmorrhage was a little more than in the other case, but was just as easily commanded. Not the slightest unpleasant symptom set in, and he left hospital in twelve days from the date of operation, greatly improved in health, and perfectly free from pain.

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* Vide *Medical Times and Gazette*, December 25th, 1852, page 643.

On making a section of the tumour, it was found to be one mass of *melanotic matter*.

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## Use of Chloroform in Delirium Tremens.

BY DOCTOR WHITE, Dundrum.

On the 27th ult., I was sent for to see a case of illness, of the above description, of two days' standing. On my arrival, I found the patient had had no sleep for forty-eight hours, with constant vomiting all that time; countenance flushed, eyes prominent, excitement great, pulse 120; much thirst, and the skin hot and dry. Anodynes, such as Battley's sedative liquor, tincture of opium, acetate of morphia, with infusion of spearmint, were given, and continued for twenty-four hours, without the least benefit. Upon the evening of the second day from my first visit (three days and nights having elapsed since the commencement of the attack), I was suddenly summoned to the patient; the messenger stated that she was dying. On my arrival, I found her unable to articulate; the extremities quite cold; pulse 60; a clammy perspiration all over the surface, with the exception of the head and face; the former being hot, the latter much flushed. I had a hot brick, rolled in flannel, applied to the feet; sinapisms to the legs and abdomen; the head shaved, and cold applications kept constantly applied; and thirty drops of chloroform, in a table-spoonful of brandy, were administered every second hour; after the third dose, two hours' sleep was procured, the first for nearly four days; and on awaking, thirty drops were again given, which had the most beneficial effect, in inducing a sleep of from six to eight hours, after which the patient progressed rapidly towards recovery, although a week or ten days elapsed before the natural articulation was restored.

The above case, I think, may prove interesting, as showing the inutility of anodynes, and how far the patient had sunk, before chloroform was had recourse to, and the speedy and effectual benefit obtained by its use.

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## PATHOLOGICAL SOCIETY MEETINGS.

### *February 11th.*

DR. HUTTON, in the Chair.

### *Abscess in the Brain, connected with Caries of the Temporal Bone.*

Dr. Hutton said, the case I am about to present to the society is one of abscess in the brain, connected with disease of the temporal bone. The subject of this disease was a girl of about sixteen years of age; always a lively, intelligent, and healthy girl, until her present illness commenced, with this exception, that she was occasionally subject to sick headaches, the pain in the head increasing till she vomited, and then subsiding. Three months before her admission she began to grow slightly deaf, and to hear noises in her ear; for this affection she was brought to a dispensary, where a probe was introduced into the meatus, which caused the discharge of a quantity of purulent fluid, after which the pain in her head became much easier. From the account given of her state at this time it would appear that a fungus arose from the diseased bone, which filled up the external meatus, and, when it was perforated, the purulent fluid found exit.

On the 30th January she was admitted into the Richmond Hospital; at this time, although she answered the questions put to her coherently, yet her manner was silly; she neglected everything about her, and, when answering questions, she often forgot the words she wished to employ, and sometimes used wrong words. She complained of great pain in the side of her head, chiefly over her brow, and there was a slight purulent discharge from her ear. When examined, there was no fungoid growth visible in the ear; her pulse was slow, the bowels confined, and the urinary secretion very scanty. She sank rapidly, and died on the 4th February, five days after entering hospital; before death it was noticed that the pupil of the eye of the unaffected side was dilated, and she had slight general convulsions.

On opening the calvarium, the dura mater over the convex surface of the brain was found healthy; on raising this the pia mater was somewhat vascular. In removing the brain some very fœtid matter escaped, of a greenish colour, from its base. The brain exhibited the appearance delineated [Dr. Hutton showed a drawing made from the recent parts]; the middle lobe of the cerebrum was fuller than natural on its lower surface, the convolutions and sulci somewhat effaced, a greenish discoloration extended over a considerable space, and the brain here felt soft and pulpy, but in other parts it appeared firm and healthy; on making a section through the discoloured portion, a cavity was discovered lined with a perfect membrane, an inch and three quarters in diameter, and containing fœtid greenish pus. The brain around this abscess was softened, but not changed in colour, being an example of "white softening." The dura mater corresponding to the seat of the abscess, and immediately over the cavity of the tympanum, was of a dark slate hue, but still retained its polish, and adhered closely to the bone; when it was dissected from the bone, the latter was found perforated by two minute openings, through which a small probe could be passed into the cavity of the tympanum. Time did not permit to remove the diseased organ, so that Dr. H. was unable to state much about the condition of the internal ear. Dr. H. observed that he had, some time since, exhibited before this society a case in which otorrhœa had existed, and had been suppressed during life, and to which succeeded fatal disease of the brain. On a *post mortem* examination there was found granular thickening of the lining membrane of the ear, without caries of any part of the temporal bone whatever; nevertheless there was an abscess in the brain, which demonstrates that the sudden suppression of otorrhœa, even when no disease of the brain exists, is not devoid of danger, and is of itself quite sufficient to give rise to inflammation of the brain and abscess. In general, however, some portion of the temporal bone is diseased, and we may expect that the locality of the abscess will correspond to the portion of the bone diseased. If the antero-superior portion of the petrous bone be affected, the abscess will most probably be in the middle lobe of the cerebrum; on the contrary, if the posterior surface under the tentorium is diseased, the cerebellum will be implicated: and it may happen that where the mastoid cells, corresponding to the lateral sinus, is affected, phlebitis may arise from the extension of the inflammation to the interior of the sinus. [Dr. Hutton here exhibited preparations showing the various seats and conditions of this disease.]

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### *February 18th.*

### DR. BEATTIE IN THE CHAIR.

DR. FLEMING related the particulars of two cases of chronic laryngitis, which had terminated fatally; the one, by the sudden supervention of acute symptoms; the other, three months after the operation of laryngotomy, from disease of the cricoid cartilage, and accompanying hectic. Drawings, illustrative of the pathological appearances, were exhibited, in addition to the morbid specimen. The selection of laryngotomy in cases of chronic affections of the larynx appeared to him of questionable value, as being in the immediate locality of such disease, especially when of syphilitic character, the ulceration in those cases usually implicating the cartilages at an earlier or later date.

DR. M'DOWEL brought before the society a case of atrophy of the left eye, with progressive softening of the left optic nerve, optic commissure, and left optic tract, and consequent loss of vision of the right eye, the details of which were published in our last number.

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### *February 25th.*

### DR. CORRIGAN IN THE CHAIR.

### *Cancer of the Uterus, producing Retention of Urine, and terminating in Death from Pericarditis.*

DR. BEATTIE said—Mr. President, cancer of the uterus is unfortunately too common a disease for any single case to be looked on with much interest by this society; but there are some circumstances connected with the case I am about to bring under your notice worthy of record.

The patient came into the City of Dublin Hospital, under Mr. Tufnell's care, and was transferred to me; she laboured under profuse hæmorrhage from the uterus, which had recurred on several occasions, with severe lancinating pain in the pelvis, and lower part of the back, and discharge of a fœtid nature. On examination, the uterus was ascertained to be in a cancerous condition, the os being hard, enlarged, rugged, and ulcerated. At this time hæmorrhage was the prominent symptom, and it was found to be best arrested by the local employment of matico-leaves, in a muslin bag, moistened with infusion of ergot of rye. The disease ran the usual course, the patient becoming more and more emaciated and weak from cancerous hectic; but, for the last few months, she had no hæmorrhage of importance, as if, in proportion as the ulceration extended, the hæmorrhage grew less; this I have observed in similar cases, contrary to what we would at first suppose likely to occur. Three weeks since, the urine, which had gradually diminished, became totally suppressed, and remained so until her death; although not expecting to find urine in the bladder, I passed a catheter, and drew off a few drops of dark bloody fluid, but nothing more; the patient remained in this state for a period of seventeen days, during which she passed no urine; about ten days ago she was attacked with severe pain in the left side of the chest, great difficulty of breathing, and very rapid and fluttering pulse; these symptoms increased, the pain was but little relieved by treatment, and she sank the day before yesterday with all the symptoms of pericarditis.

On examining the body we found what will account for the unusual way in which she died; the ordinary cause of death in these cases is either from the accompanying fever and exhaustion, from hæmorrhage, or from the ulceration extending to the peritoneum, and causing peritonitis, or enteritis; her death, however, did not arise from any of these, but from a cause which I have observed in one or two other cases. There is a preparation, placed by me, twenty years ago, in the College of Surgeons' Museum of one of these, exceedingly similar to that which I now exhibit, and I had lately a lady under my care who died in the same way. I do not find it noticed by any of the authors treating of this disease, and, therefore, it is of importance to dwell on it. The disease commenced in the cervix uteri; we found the uterus not much larger than natural, but very hard, and held in its place by close attachments to the bladder; the ovaries were healthy, the os and cervix uteri extensively ulcerated, and the disease had extended to the bladder, involving that organ, between which and the vagina a large cancerous opening was discovered; the orifices of the ureters were sealed up completely by the mass of cancerous matter, preventing the escape of the urine into the bladder, and causing the right ureter to become distended nearly to the size of the small intestine; the left ureter, which was double, was also distended with urine, and as large as the colon, the consequence was that the urine, being unable to escape from the kidneys and ureters, was thrown back as it were on the system, and produced poisonous effects, as we know it does in the male when obstructed for any length of time. In the two former cases that I have just alluded to, the brain was the part affected, and the patients died comatose from effusion; but, in the present instance, the pericardium was the seat of the effusion; it contained nearly a quart of dark-coloured, thin, serous fluid; and both the inner surface of the pericardium, and the heart, were covered with recently deposited lymph. The kidneys were not diseased, they were simply distended by their own secretion; there were no enlarged glands in the pelvis, and the other viscera were perfectly healthy.

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## SUMMARY.

*To prevent Pitting in Small-pox.*—Dr. Bennett, in the April number of the *Edinburgh Medical Journal*, states the results of his investigations upon different means of preventing pitting in small-pox. He considers the following formula most effective:—"Carbonate of zinc, three parts; oxide of zinc, one part, rubbed in a mortar, with olive oil, to a proper consistence." This is applied over the face, and renewed from time to time, so as to take the place of the natural scab, and enable the parts below to heal more slowly and perfectly than if exposed to the air; it forms a coherent, tough crust, which remains on the face for a long time. Dr. B. is of opinion that it is much preferable to the use of mercurial ointment, thickened with starch, which he formerly advised, the latter being liable to cause dangerous salivation in some instances, the risk of which is a serious objection to its employment, especially as the mercury is not, he thinks, in any way necessary to the success of the treatment.

*On the Absence of Chlorides from the Urine, in Pneumonia.*—The investigations of Dr. Bennett tend to confirm the statements of Simon and Redtenbacher, that chloride of sodium, which is always present in healthy urine, disappears from it during the progress of pneumonia, and returns when the absorption of the exudation is about to commence. In the thirty-fifth volume of the Transactions of the Medico-Chirurgical Society of London, Dr. Beale published some valuable researches upon this point; and it appears that in Vienna, in the clinical wards of Professor Oppolzer, a knowledge of this remarkable fact is occasionally of great service in a diagnostic point of view. Three cases are recorded by Dr. Bennett, one of which is subjoined:—A man, æt. 25, was admitted, labouring under well-marked, simple pneumonia, at the apex of the right lung, the result of exposure to wet and cold two days before admission. On adding a drop of nitric acid to some of his urine, in a test-tube, and then dropping into it a little solution of nitrate of silver, the fluid remained clear, although, so great is the delicacy of this test, that a white, cloudy precipitate is at once formed, if a very minute quantity of the chloride of sodium be present. It was on the fourth day of the disease that the observation was first made, and the chlorides remained absent during the fifth and sixth days, during which period the disease extended from above downwards, until it occupied the upper two-thirds of the right lung. On the seventh day, a slight haze was observed in the urine, indicating that the salt was returning to that fluid, and the man expressed himself as being much better. On this day, there was great dulnesss on percussion; all crepitation had ceased; the breathing was tubular, with bronchophony. On the eighth day, slight returning crepitation was audible; the dulness had diminished, but the urine, owing to some accident before the visit, had been thrown away. On the ninth day, however, the chlorides were abundant in that fluid, together with lithates; loud crepitation was now universal throughout the lungs, and the dulness had nearly disappeared. From this time, the man rapidly recovered, and was discharged quite well on the sixteenth day. Chloride of sodium is probably absent in other diseases as well as pneumonia; thus they were not detected in a case of peritonitis, nor in some cases of small-pox, in Dr. Bennett's ward; but further investigations are necessary on this subject. The deposit which phosphates produce with nitrate of silver is at once distinguished from that caused by chlorides, by the solubility of the latter in ammonia, which prevents any fallacy from this source.

*Glycerine, and its Medical Uses.*—M. P. A. Cap, in the *Journal de Pharm. et de Chimie,* has published some interesting remarks on this substance. After mentioning its discovery in 1779, by Scheele, in the water which remained as a residue in preparing litharge plaster; and also, Chevreul's investigation, at a later period, into the nature of fatty bodies, by which he showed that glycerine was a constant product of saponification, he details the following process, by which he obtains it in a complete state of purity, fit for medical use:—The mother liquids of soap-works, or of stearic acid factories, are concentrated by evaporation, and the amount of lime they hold in solution is determined by means of oxalic acid; a quantity of sulphuric acid is then added, equivalent to that of the oxalic acid necessary for the saturation of the lime; the liquid is decanted from the resulting sulphate of lime, and boiled in a wrought-iron pot, covered with a thick plate of lead, care being taken, at the same time, to agitate the liquid powerfully by an appropriate stirrer. The fatty acids volatilize, and the solution begins to lose its colour, and its disagreeable smell; when of density 10° of the areometer, it is cooled, and filtered to remove a fresh quantity of sulphate of lime; the excess of acid is now saturated with a little carbonate of lime, and the evaporation continued, still rapidly agitating the solution; when of density 24°, a fresh deposit of sulphate of lime falls, and is removed by filtering through a cloth; it is then evaporated a third time, until of density 28° when hot, and again filtered through animal charcoal; by these means, it is obtained entirely free from odour, or colour, and of a syrupy consistence; it is now fit for medical use, although still containing a large proportion of water, which it is difficult to remove.

In a therapeutic point of view, the physical properties of glycerine are very interesting, and so singular, that is remarkable that manufacturers, as well as the medical sciences, should not sooner have turned them to use. Glycerine neither belongs to the gummy nor the fatty bodies, it is a neutral body, *sui generis,* ordinarily liquid and uncrystallizable; like water, it mixes in all proportions with aqueous liquids, alcohol, and vinegar; and it dissolves most of the bodies which can be dissolved by water; like oil, it is unctuous to the touch, and it does not evaporate, in contact with the air; applied to the living tissues, it lubricates, and renders them supple, *without greasing them;* it mixes in certain proportions with lard, and the fatty bodies, it dissolves the volatile oils, and is not susceptible of becoming rancid. These remarkable properties found in glycerine, are such as characterize two bodies, in some respects antagonistic, water and oil; it is, therefore, natural to suppose this substance would play a part, alike new and varied, both in the arts and in medical science. Glycerine has been found useful in most cutaneous affections; observation shows that it easily penetrates into the pores of the skin, softens this organ, and retains on its surface, in consequence of its hygrometric properties, a species of permanent moisture, very efficacious in cases of dryness and thickness of the dermis; it heals cracks in the nipple and skin; it preserves its softness, and calms erethysm. Dr. Dallaz says it is the best known cosmetic; Trousseau has proved its good effects in superficial complaints of the skin, especially in prurigo; he likewise speaks of its known efficacy in certain complaints of the ears, which proceed from cutaneous irritation, extending from the exterior to the interior of the auditory apparatus; and he states that it is useful in all affections of the skin, which would be irritated by fatty or exciting applications. Dr. Bazin has made frequent and successful use of it in eczema, zona, acne, icthyosis, and generally in all cutaneous diseases, which do not depend on an alteration of the internal system, and he finds it preferable to the most vaunted irritant cosmetics, such as tar-water, alkaline solutions, and corrosive sublimate.

In pharmacy, it is evident that its unctuous state, its slightly hygrometric properties, its analogies to water and oil, and its perfect harmlessness, render it fit for various uses: it mixes in all proportions with water, for baths, injections, fomentations, and lotions of all descriptions; applied to burns, or other wounds, it keeps them from the air and maintains the suppleness of their edges. Added to cataplasms, it preserves their softness, and prevents their adhering to the surfaces on which they are applied. Uniting, also, readily with oleaginous substances, it will serve as a base for liniments, ointments, and embrocations; it will mix with extracts and tinctures, and a few drops, added to a pillular mass, will prevent it from drying, &c.; but these do not limit its uses. Glycerine dissolves the vegetable acids, the deliquescent salts, sulphate of copper, nitrate of silver, potassa, bromine, iodine, and many other substances. The salts of morphia are soluble in it completely, even when cold, in all proportions; sulphate of quinine which, in the proportion of one-tenth, dissolves in it while hot, separates again when cold, in clots, which, however, are miscible by trituration, giving it the consistence of a cerate, and the salts of brucine, strychnine, and veratrine act in a similar manner. This enables us to employ these substances usefully in frictions and embrocations; forming a new series or order of medicaments.—See the *Chemist* for April.

*Glycerine in Dandriff, or Pityriasis of the Scalp.*—In the Middlesex hospital, Mr. Shaw is using glycerine for pityriasis of the scalp. It is said to be effectual in clearing away the branny scales from among the hair. It is used as a hair oil, and may have any agreeable perfume mixed with it.—See *Assoc. Med. Jour.*

*New Salts of Quinine.*—A carbonate of quinine has been obtained by Langlois. He dissolves ten grammes of sulphate of quinine in water, acidulated with sulphuric acid, and decomposing this solution by ammonia, he collects the pure quinine, which precipitates on a filter, and, after washing it, mixes the moist quinine with one litre of water. The milky fluid is placed in a glass vessel, and dissolved by a stream of carbonic acid gas, a perfectly clear solution is thus obtained, which may be employed in practice; or, if exposed to the air for a short time, needle-shaped crystals of carbonate of quinine are deposited, which are soluble in alcohol, but insoluble in ether; when heated they decompose, evolving carbonic acid, and leaving a residue of quinine.

Dr. Bartella, an Italian physician, speaks highly of the sulpho-tartrate of quinine as a remedy for the intermittent fevers so common in Tuscany; in a paper published in the Gazetta Medica Toscana, he asserts that the sulphate of quinine, when combined with an equal quantity of tartaric acid, is much more active, and therefore more economical than the ordinary sulphate, so that it may be employed in doses not exceeding one half of those usually given. M. Casorati publishes the following formula for its preparation:—Sulphate of quinine, sixty centigrammes, tartaric acid, twenty to thirty centigrammes, or more if necessary, syrup of orange, forty-five grammes. Mix. This is employed in suitable doses, diluted with water.

*Adulteration of Quinine.*—Lehman has recently examined some sulphate of quinine, which he found to contain no less than twenty-five per cent. of sulphate of soda (Archiv. der Pharmacie). This is surpassed in Liverpool, where the quinine supplied for the use of the poor has been shown, by Dr. Brett's analysis, to contain thirty per cent. of adulteration.

*Preservation of Leeches.*—Metallic iron is stated in the "Algemeinen Polytechischen Zeitung" to be an excellent means of preventing water from becoming foul. With reference to this statement Wittstein observes, that he has remarked the efficiency of this remedy in water where leeches are kept: they can be preserved for a whole year in the same water, if that which is lost by evaporation is replaced from time to time, and some iron nails be placed in it, without the water becoming foul. The slime which the leeches throw off combines with the rust of the iron, and thus prevents the water from becoming putrid, which destroys the leeches.—*Annals of Pharmacy.*

*On Aluminium and its Chemical Combinations.*—By M. H. Sainte-Claire Deville.—It is well known that M. Wöhler obtained pulverulent aluminium, by treating chlorine with potassium. By modifying M. Wöhler's process, the decomposition of chloride of aluminium may be regulated so as to produce a sufficient incandescence for us to see the particles of this metal agglomerate and resolve themselves into globules. By taking a mass composed of the metal and chloride of sodium (it is better to employ sodium), and heating it in a porcelain crucible to a bright redness, the excess of chloride of aluminium will be disengaged, and there will remain a saline mass with an acid reaction, in the middle of which will be found larger or smaller globules of perfectly pure aluminium. This metal is as white as silver, malleable and ductile in the highest degree. However, on working, it will be found to resist considerably, and its tenacity might be supposed nearly that of iron. It hardens, but warming again restores its ductility. Its fusing point is very near that of silver. Its density is 2·56. It may be melted and poured in the open air without sensible oxidation. It is a good conductor of heat. Aluminium is completely unalterable, either in dry or humid air; it does not tarnish, and remains brilliant where freshly cut zinc or tin lose their polish. Sulphuretted hydrogen has no action on it. Neither cold nor boiling water will tarnish it. Nitric acid, whether weak or concentrated, nor weak sulphuric acid, employed cold, will take any effect upon it. Its real solvent is hydrochloric acid; it disengages hydrogen, and sesquichloride of aluminium is formed. Heated to redness in gaseous hydrochloric acid, it produces dry and volatile sesquichloride of aluminium. It will easily be understood that a metal as white and unalterable as silver, which does not tarnish in the air, which is fusible, malleable, ductile, and yet tough, and which has the singular property of being lighter than glass, would be most useful, if it could be easily obtained. If we consider, besides, that this metal exists in considerable proportions in nature, that its ore is argil, we may well desire that it should become of general use. I have much hope that it may be so; for chloride of aluminium is decomposed with remarkable facility by common metals, at a high temperature, and a reaction of this nature, which I am now endeavouring to realize on a larger scale than a mere laboratory experiment, will decide this question, in a practical point of view.—*Comptes Rendus, No. 6, February 6th,* 1854.

*Test of the Presence of Lead in English Sulphuric Acid.*—By J. Lowenthal.—A portion of the acid to be examined is mixed with one or two drops of muriatic acid, by which, if lead is present, a very distinct white cloud results at the point of contact of the two acids, and a strong white turbidity forms by agitation, which again disappears on the addition of more muriatic acid. By experiments which I conducted with chemically pure sulphuric acid, I have convinced myself that only lead, and no other impurity existing in commercial sulphuric acid, can produce this reaction, and therefore, by the use of this test, which is very delicate, no error can arise. The precipitate is, without doubt, chloride of lead, although I have not closely examined it, but, nevertheless, I detected lead as one of its constituents.—*Journal für Praktische Chemie*, and *Annals of Pharmacy*.

*The Cholera in Paris.*—On the 8th of April, there were forty-seven cases of cholera in the hospitals of Paris; in the course of the day, three new cases were admitted, and three others reported among the inmates of these institutions; one death happened on the same day. The total number of cases treated in the hospitals, up to the 8th of April, was 1204, of which 574 had died, and 582 were discharged cured.

*On the Use of Collodion in Burns.*—This fluid, when applied to burns, promotes healing and prevents suppuration. Blumhardt (Würtemburg Corresp. Bl. No. 56) has tried it with great success in three cases, one of them caused by explosion of gunpowder, and two by the ignition of spirits of wine, where the breast, neck, face, and hands were all severely scorched; collodion was applied to the skin, an hour and a half after the accident, by a hair pencil; the redness, pain, and swelling were thereby diminished, and the patients soon experienced no inconvenience, save the tension occasioned by the firmly adherent pellicle. The inflammation completely subsided, and the recovery was rapid. He considers the collodion to act beneficially in two ways: *first*, by affording a safe, protective covering to the sensitive cutis; and *second*, by giving a uniform support to the part, and relieving the capillaries from all undue distention.—*Edin. Monthly Journal.*

*On the Treatment of Gangrene of the Lung by Inhalations of Turpentine Vapour.*—Four cases of gangrene of the lung have been treated by Professor Skoda in the following manner:—The essence of turpentine is poured upon boiling water, and the patient is directed to inhale the vapour for fifteen minutes every two hours. Sulphate of quinine is administered also in the usual doses. The first case was that of a servant affected with limited gangrene of the superior lobe of the right lung. After six weeks of this treatment, it became impossible to detect either infiltration or gangrene of the organ. On the contrary, the respiratory murmur had returned over the whole region. Three months afterwards the patient was seen in good health. In the second case, an inn-keeper of mature age and strong constitution became the subject of a gangrenous cavity in the lower lobe of the right lung, consequent upon disease commencing March 11, 1852. On March 21, the patient commenced the inhalations of the vapour of turpentine: he continued without repugnance, for five or ten minutes every two hours, taking, at the same time, the usual doses of quinine. At the end of three weeks, the expectoration, which had been extremely abundant (a pint and a-half daily), became reduced to a quarter of a pint. The inspirations had been employed four times a-day. At the end of six weeks, the patient could quit his bed. His strength was returning, the appetite was improved, and his general aspect favourable; but the expectoration continued to be fetid from time to time, and was always sanious. The right side of the chest was painful, and respiration laboured, but the air entered the circumference of the lower lobe; the respiration being uncertain and accompanied by feeble râles and sibilance. The patient went into the country, where he continued the turpentine inspirations twice a-day up to the middle of July, when both cough and expectoration had entirely disappeared. In the month of December, 1852, he came to M. Skoda for a certificate of health. There was no pain, nor oppression, nor cough. He had recovered his *embonpoint* and his strength; there was no retraction of the thorax; vesicular respiration everywhere. In the third case it was not in the Professor's power to persist in the plan. The fourth case is still under treatment. A butcher, of strong constitution, had a gangrenous cavity in the inferior lobe of the left lung. He fell ill about the end of May, 1852. The inspirations of turpentine were commenced June 4. At the end of a week, the fetid expectoration, which daily equalled two pints, had entirely disappeared, and the patient considered himself well, because the pain and the oppression in breathing had diminished; the appetite was returned, and the sleep was tranquil. He, therefore, left off inhaling the turpentine, which was extremely disagreeable to him. On June 19 there came on a severe shivering fit, with cough and dyspnœa, and during the following night the patient expectorated several pints of extremely fetid sanies of dirty brown colour. The inspirations were recommended, but the patient used them as little as possible, on account of the irritation which they produced in the air-passages, In eight days the quantity of matter brought up had greatly diminished, and the pulse was normal, but there was pain in the chest. The patient lay immoveable upon his back in a state of great weakness and prostration; there was no appetite. The lower lobe of the left lung was impervious to air. The inspirations were again suspended, but again recommenced on account f recurrence of the bad symptoms; the disagreeable odour of the turpentine being partly recified by a few drops of the essence of rose. About he middle of October he was able to go into the ountry, having recovered strength sufficient to eave his bed; nevertheless there remained a ense of oppression and pain under the left scaula. At the end of January he considered himelf well. There was a sudden expectoration of wo ounces of blood, after a slight fit of coughing, n February 10, probably proceeding from the allous walls of a former gangrenous cavity; but here are no signs of further infiltration, and the ase seems likely to terminate well.—*Zeitschrift ür k. k. Geselchafft der Aertze se Wien*, 1853, . ix. p. 445.

*On the Chemistry of Prescriptions.*—At a meeting f the Chemical Discussion Society, reported in he *Chemist* for April, this subject was brought orward.—Mr. Greenish exhibited a phial conaining equal proportions of tincture of iodine, nd tincture of opium, which had been prescribed s a liniment. The tinctures, when mixed, ormed a thick glutinous compound, which it vas perfectly impossible to apply as intended; lecomposition had ensued, and a precipitate had ormed, consisting of the ioduretted hydriodate f morphia and the gummo-resinous portion of he opium, which entirely altered the character f the agents, and rendered the compound useless s a liniment. Mr. Greenish also read a precription for making ointment, composed of Ung. Iyd. Nitratis and Creasote; it was very troubleome to mix in the first instance, but when, pparently, a satisfactory result had been obained, slow decomposition ensued, resulting n a kind of fermentation; the lid of the pot eing pushed off; and after a lapse of twenty-our hours, no odour of creasote remaining. Ir. Williams explained the cause of the deomposition, and stated, that if creasote was issolved in glacial acetic acid, and the solution dded to strong nitric acid, and the mixture left or some days, a great number of crystals of xalic acid were produced, while carbonic acid as was evolved; this result could not be obtaind by adding the creasote direct to the nitric cid, as the action was then so violent as to cause nore complicated results. He imagined that the ard, &c., in the ointment acted in a similar nanner to the acetic acid in his experiment, liluting the active agent, and moderating the ubsequent reactions; thus, he conceived that he ultimate result of adding Creasote to the Jng. Hyd. Nit., was the production of oxalate of nercury; and the carbonic acid formed at the ame time caused the ointment to swell, and so ecome unfit for use. If no free acid had existed n the ointment, no such result would occur.

*Dislocation of both Hips at the same Time in he same Subject.*—By H. L. Prichard, Esq.—homas Phillips, aged 15, a railway waggoner at the Cwmavon works, on the evening of the 25th of March, while in a stooping posture in the act of turning the switch, was overtaken and knocked down by a truck running with some velocity down an inclined plane. He escaped the wheels; but the body of the carriage, which was ten inches only from the ground, passed over him, and, as he described it, "doubled him up." The case presented a remarkable appearance. The knees and toes were inverted; the former were closely approximating each other, while the latter rather overlapped one another. The head of each femur was distinctly felt under the glutæi, on the dorsum of the ilium. The reduction of the right hip was readily effected with the pulleys, in the manner recommended by Sir Astley Cooper, with no other preparation than that of chloroform, which the patient took *con amore*. In eight or ten minutes the bone passed into its socket with a satisfactory jerk, audible to the bystanders. The left was immediately afterwards subjected to the treatment in like manner, but was not so easily reduced. Extension having been kept up during thirty-five minutes, the knee was found to have descended parallel with that on the opposite side. The pulleys were relaxed, and the limb simultaneously rotated, while my colleague, Mr. F. M. Russell, kept up the transverse extension in the usual manner, and the reduction was effected, but without a perceptible crack,—attributable, I apprehend, to the exhaustion of the muscles from continued extension. I presume an accident of this description is very rare. It is the first with which I have met; and I do not recollect to have read of such a case.—*Assoc. Med. Jour.*

*On the Production of Local Anæsthesia.*—Dr. Snow, at a meeting of the Medical Society of London, on April 10, read a paper upon this subject. He said:—"That, when a piece of folded lint, moistened with chloroform, was applied to the skin, and covered with some impermeable substance, it caused a sensation like that occasioned by a mustard poultice, and the skin became red. After the lapse of a few minutes to half an hour, there was a feeling of numbness in the part, and its sensibility was diminished, so that pricking with a needle did not cause so much pain as usual. He had never succeeded, however, in causing complete anæsthesia by chloroform applied to the sound skin, nor had he been more successful with several other agents he had tried. Hydrocyanic acid of 5 per cent., and a strong solution of cyanide of potassium in water, caused a diminution of sensibility, with less irritation, than any of the other medicines. The difficulty of causing local anæsthesia depended on the slow and sparing manner in which fluids permeated the cuticle, and the readiness with which the small quantity which did permeate was carried away in the blood.

When the skin was denuded of cuticle, it was readily made insensible, even by the vapour of chloroform confined over it, and the raw surface could be rubbed without causing any sensation. The only means they as yet possessed of producing complete local anæsthesia was that of refrigeration, proposed by Dr. James Arnott. When a part was cooled by the application of a mixture of pounded ice and salt, it became of the colour of parchment, as hard as suet, and perfectly insensible. The insensibility, however, extended to only a very slight depth. He had congealed, in this manner, part of the palmar surface of the hand and fingers, but, on separating the latter, and examining the dorsal surface of the web which connects them, he found it quite sensible to the pricks of a needle, even when removed from the hard and insensible palmar surface, by a thickness of only the tenth of an inch. The burning kind of pain caused by the application of ice and salt to a sensitive part, such as the hand or fingers, was very considerable, and it was still greater about five minutes afterwards, when sensibility returned. In fact, if he (Dr. Snow) required the application for any other purpose than to watch its effects, he would inhale chloroform while it was done. He, therefore, did not think this process very available, even for superficial operations, except when the surgeon or the patient had an objection to the inhalation of chloroform. A new plan had lately been tried in the hospitals of Paris, with some amount of success, in preventing the pain of minor operations by refrigeration. It consisted in dropping ether on the part, and increasing the evaporation with the bellows. He (Dr. Snow) had tried this on a patient of Mr. Ure, in St. Mary's Hospital, preparatory to his dividing the callous edges of an ulcer of the leg. It was quite successful at that edge of the ulcer where the ether had chiefly fallen, but less so at the other side. This process caused less pain than the application of ice and salt; and M. Matthieu, an instrument maker of Paris, had contrived a means by which it could be more effectually applied than in the above case." A discussion ensued respecting various modes of producing local anasthesia, and also upon the mode of death from chloroform, and Dr. Snow stated, that he quite agreed with Dr. Crisp, that the animals which died suddenly, during the exhibition of chloroform, died from the action of that agent on the heart, and this was true also in cases of patients who had died from chloroform: he could not agree, however, that such accidents were unaccountable, or depended on difference of constitution. In numerous experiments he had performed on animals he had invariably found that, when the air they breathed contained not more than five per cent. of vapour of chloroform death took place very gradually, the breathing became embarrassed before it ceased, and when it had stopped the heart continued to beat for a minute or two. During this interval the animals often gave a gasp, and recovered spontaneously, and they could always be easily recovered by artificial respiration. On the other hand, when animals were made to breathe air containing eight or ten per cent. of the vapour, they died suddenly, death commencing at the heart. He could kill animals in this way at pleasure, by making them breathe air charged with ten per cent. of vapour of chloroform. In performing physiological experiments on animals, where it was necessary to apply the chloroform on a sponge or towel, accidents might be avoided by first mixing the chloroform with two parts by measure of rectified spirits, after which it could not give off more than about five per cent. of vapour. As regarded the accidents from chloroform to the human subject, he was satisfied that none of them had happened from mistaking the symptoms, and going on too long with the inhalation. The history of every case showed that the heart had suddenly ceased to beat. If too much vapour of chloroform was taken into the lungs at any one moment it might so charge the blood passing through these organs at the time as to paralyze the heart at once by its local action on that organ. The first consideration in giving chloroform, therefore, was to take care that the vapour should be largely diluted with air; in fact, that the vapour should never exceed five per cent. of the air the patient was breathing, and then sudden accidents could not take place.—*Med. Times* and *Lancet.*

*Bark of the Musenna Tree.*—The musenna tree is indigenous to Abyssinia, and, like the kousso, is highly prized by the inhabitants of that country as a valuable and popular remedy for the tape-worm. To a native of Gondar, Dr. Pruner gave sixty grammes of this bark in powder, which brought away one of these entozoæ almost in an entire state. Succeeding so well in this his first case, the same physician administered the same medicine, and in the same manner, in nineteen other cases, and with equal success. One advantage which the musenna bark has over the koussa is, that it destroys the tape-worm without exciting the violent purging that the latter not unfrequently causes.—*Annals of Pharmacy.*

*Anthrakokali.*—This caustic preparation, much in use in the hospitals, and otherwise in medical practice in Paris, and elsewhere on the Continent, is thus directed to be prepared:—Dry caustic potass, five parts; common soot, seven parts: mix, and reduce to a fine powder in an iron mortar.—*Annals of Pharmacy.*

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## CLINICAL LECTURES AT ST. VINCENT'S HOSPITAL.

BY DR. O'FERRALL.

### *Stricture of the Pyloric Orifice of the Stomach, masked by Symptoms resembling Ileus; Diagnostic Marks; Case in Illustration.*

Amongst the embarrassments incidental to the study of abdominal diseases, there are none which require more vigilance than those which arise from the simulation of acute affections of the viscera, by the urgent symptoms which occasionally attend the advanced stages of a chronic disease. The clinique of every session brings its examples, in proof of this proposition. A patient is brought into the hospital, labouring under the symptoms of ileus, and it is often difficult, through the mists of an obscure history of the case, to discern the evidence of a chronic thickening of some portion of the colon or rectum, upon which the urgent phenomena depend. Now, here, at least, the existence of obstructive disease may be occasionally presumed, although the uncertainty as to the duration and seat of that disease may raise a question as to the manner in which it may best be treated. A case of ileus, depending on some acute inflammatory action, will require one course of management, while a case arising from either the spasm or atony of individual portions of the intestinal tube, may demand another. The works of the celebrated Dr. Abercrombie abound in practical lessons of this kind. But modifications of treatment, differing somewhat from either, will be suggested by a previous knowledge of the fact, that chronic changes have been progressing to a degree capable of interfering with the functions of the part.

All those points may require elucidation, although, as I have said, the fact of the existence of obstruction of some kind, in some portion of the tube, may be satisfactorily established. In all such cases the difficulty is limited to making a differential diagnosis between the several forms of ileus, and deciding which of them is represented by the case then before us. But you will occasionally meet a difficulty of another kind, namely, that of distinguishing from ileus, in any of its varieties, a case which, bearing a strong resemblance to it, is, however, a pathological condition of another kind. The proposition, to the consideration of which, on the present occasion, I wish to direct your attention, is this, that the prominent symptoms of ileus may exist, without any functional or organic obstruction, in any portion of the intestinal tube, below the stomach; that prolonged constipation, with constant vomiting, with pain referred to the umbilical region, and a tumid abdomen, may constitute a group of symptoms, having no other origin than stricture of the pyloric orifice of the stomach.

To those who have not had the advantage of your extensive opportunities of witnessing those cases, the proposition may be startling; but you will recollect how often, during the progress of a well observed case of chronic disease, I have asked you to consider what diagnosis you would have made, if you had, at certain stages of the case, seen the patient *then for the first time.* Now, in the matter before us, you will find no difficulty in recognizing the truth of the following sketch.

A patient complains of uneasiness after food, and this gradually assumes the form of pain referred to some portion of the epigastric region. Sooner or later, relief is obtained by rejection of the aliment. As the disease advances, the vomiting becomes more frequent, and constipation becomes a remarkable feature in the disease. The evacuations become more rare, as the quantity of food suffered to pass through the pylorus becomes diminished. The feculent matter becomes solidified in the colon, and a certain amount of flatulent distention takes place in the parts above it. Here, then, you may have prolonged constipation with vomiting and pain, but no practitioner could possibly think of ileus in a case so clearly pointing to its real nature. But continue to trace its progress a little further. The locality of the pain is no longer the same. It is now referred to a point lower down in the abdomen, and the upper half of this cavity becomes the seat of tumescence—the consequence of habitual distention of the stomach by profuse liquid and gaseous secretions into its cavity.

If now seen for the first time, and that, in addition to prolonged constipation, vomiting, and pain referred to the umbilical region, you have, also, intumescence of the whole abdomen, the case will be less clear, unless the patient accompany the description of his present sufferings with a history of their antecedents, capable of making them properly understood. It may be supposed that the peculiar emaciation of the patient's features might be sufficiently well marked to enable you to recognize the expression of pyloric disease; but you will not find this test so conclusive as you might imagine; for the expression alluded to may actually be mistaken for the collapsed and sunken face of ileus. Constant vomiting, from whatever cause, gives a collapsed appearance to the features; and it will require close observation to enable you, at first view, to distinguish that which depends upon exhaustion from this cause from that which belongs to a previous disease.

There is, however, one symptom which, even without the history of the case, should awaken suspicion as to its real nature. It is a *transverse wrinkle or fold* in the integuments, and which generally traverses the middle of the umbilical region. Now, this transverse fissure is by no means pathognomonic of pyloric or hepatic disease. Its signification is simply this, that, from some cause, the intestines are not permitted to occupy their usual share of the upper half of the abdomen, and are habitually pressed down, and made to form a separate projection or swelling in the lower half of the cavity. This condition may occur as a consequence of some form of organic disease of the liver or omentum; but, then, you will find this upper half of the abdomen to yield a dull sound on percussion, while, in the case of great distention of the stomach, the sound is remarkably clear. When both diseases coexist, the limits of either will be marked by its corresponding modification of this physical sign. This transverse sulcus may be present also in that curious state, which, in a former lecture, I have described under the name of ***Mimotic Tympany***; but, in the latter case, it is rather a transverse depression than a fissure, and, occurring as it does in very young persons, is not at all likely to create difficulty, or lessen its value as a symptom in the disease of the pyloric orifice of the stomach. Indeed, the soft, pliable, and well-nourished integument of a child could not possibly assume the same deep wrinkled appearance which belongs to the case of an adult, gradually wasting away from inanition. There is another appearance presented by the upper half of the abdominal cavity, which is very characteristic of obstruction in the pyloric orifice of the stomach. It takes place at uncertain intervals; and if it happens to occur at the moment when the abdomen is uncovered before you, it will not fail to suggest its proper explanation. The appearance to which I allude is a peculiar undulatory movement in the parietes of the stomach; a sort of peristaltic movement, by which the contents are, from time to time, propelled, with an audible gurgling, towards the pylorus, and as often are returned to the great end of its cavity on meeting with the usual resistance. This remarkable movement sometimes developes the external appearance of that peculiar division of the stomach into two portions, which physiologists believe to indicate a separate function belonging to each. Additional assistance may be obtained by percussion over the organ. The peculiar tympany will be elicited all over the stomach, and will mark its limits. It will also conduct the fingers gradually to the point where this phenomenon ceases; and here is generally the seat of the pain. A careful and gentle manipulation will also detect in this situation, even through the general swelling, a deep-seated induration, which belongs to the altered pylorus, and indicates its change of place. The distinction between pyloric tumours and other tumours, when occupying the middle portion or lower half of the abdomen, may often be made in this way.

Another aid in diagnosis, may be found in a careful examination of the fluid ejected from the stomach. In disease of the pylorus, I never saw the contents of the duodenum ejected. Bile is never seen after the period when the stricture is formed; and the admixture of feculent matter, which is occasionally met with in ileus, is never observed here. Thus, the character of the fluids ejected may, in doubtful cases, afford ne-

ve information of great value; but they will,
sionally, present an appearance often con-
ed with, though not conclusive of, organic
ase; the copious mucous secretions are then
ed with that dark sanguineous exudation,
h is called "coffee grounds." This charac-
tic vomiting may, it is true, not be had in
ence, on your first visit, or it may be absent
ie particular case, and the undulatory move-
t of the stomach may not take place at the
al moment when the surface is exposed to
view, and the transverse fissure alluded to
be, in some measure, obscured by the gene-
welling; but, when these three phenomena
present, they should suggest the probable
tence of organic disease of the stomach,
tever may be prominent symptoms in the
. The record of a case, lately under your
rvation, in Lawrence's Ward, will recall to
recollection the value of those symptoms in
lucting the inquiry.

**ASE.**—A man, 60 years old (James Lannery),
brought to the hospital on the 2nd of April,
4. He was considered, by the medical man
had seen him, to be labouring under ob-
ction of the bowels. Every medicine admi-
ered had been rejected by the stomach,
had failed to produce evacuations from
bowels. The poor man was very deaf and
id, and gave no information in his own
.

he history extracted from those who brought
to hospital was this:—He was the owner of
urf boat, part of the cost of which still re-
ned unpaid. The boat plyed on the Grand
al, and its station was at Harold's Cross,
re the cargo of turf was generally sold. His
resided near the bog, twenty miles from
n, and was in constant attendance on a son
g of consumption. The poor man was, con-
ently, much neglected, and was accompa-
l only by two men, assisting to manage the
. They stated that he fell ill about a fort-
it before, and, from that time, never left the
rable cabin where he lay, complaining of
in the belly, and constantly vomiting.
y, at length, induced a poor woman in the
hbourhood to receive him into her lodgings,
the nature of his illness, and the advice of a
ical man, made her determine to have him
oved to hospital. It was stated, that he had
no evacuation from the bowels for eight
, and that nothing remained on his stomach.
admission, he was ordered small doses of
mel, at short intervals, the attendant having
rtained that there was no hernial protrusion
amour, in any of the usual situations.

n the next morning, I saw him. No eva-
ion from the bowels had yet occurred. His
hess rendered it almost impossible to com-
icate with him. His tongue was florid, but
dry; his pulse was 108, small and easily compressed; his wrist was dry, and his hand felt emaciated.

The abdomen, uncovered, was tumid and tympanitic, and bore pressure everywhere, except at the umbilicus; and to this point, I learned, he had referred his pain. The swelling of the abdomen was not uniform, but seemed to consist of two portions, separated by a transverse wrinkle, in the situation where it might be expected to occur in the sitting posture, with the trunk leaning forward. This, at once, attracted my attention, and I desired to see the fluid vomited. It had just before been taken away, and I, accordingly, went to visit other patients in the ward, intending to return as soon as he vomited again. This occurrence soon took place, and, as the quantity was considerable, and it contained a proportion of "coffee grounds" matter, my suspicion was increased. On again uncovering the abdomen, I percussed the upper half carefully, and found its resonance to be sharper than that of the lower. Tracing this resonance downwards, and to the right side, it ceased about the umbilicus; and here I could detect a deep-seated, but distinct tumour.

Pressure here was, evidently, painful, as his countenance indicated. In the course of this short examination, my attention was attracted by a gurgling noise, and distinct movement in the tympanitic swelling, just below the margin of the ribs, on the left side; the prominence became less at the extreme left of the part, while the bulging traversed from left to right, approaching the spot where the induration had been felt; the projection was here, for a moment, very great, but almost immediately began to subside, while the swelling, like a wave, returned again to the left, and the original condition was reproduced. I had now very little doubt that the poor fellow laboured under stricture of the pylorus, and that the constipation was not that of ileus. Renewed attempts were made to procure from the patient an account of his previous health, but little information was obtained. He considered himself tolerably well, until about three weeks ago; but admitted that he always had "a bad stomach," and that if he ate bacon at dinner, he was sure to throw it off afterwards.

It would be loss of time to recite the daily occurrences in the case, from this time to the day on which he died, the 19th of April. His strength never rallied. The bowels were opened by enemata, and the lower half of the abdomen lost its tumid appearance, giving more characteristic prominence to the upper portion, in which it was, every day, more easy to recognize the real lesions. His urine was generally scanty and deep coloured; no albumen. Specifie gravity, 1025.

Notwithstanding the use of every remedy, external and internal, the stomach never seemed to retain food; the quantity rejected far exceeded that taken in; and was always mixed with the dark brown matter before mentioned. Every variety of aliment, mixed, in turns, with brandy or solid ice, were tried in vain; every medicament was employed, but failed, either to allay the inverted action of the stomach or restrain the profuse secretions which filled and distended its cavity.

*Necropsy.*—The general emaciation was considerable; the integuments had a dry and shrivelled appearance.

In the abdomen, the stomach occupied a large share of the cavity; it descended, at its great extremity, below the umbilical region, and ascended towards the pylorus, which lay behind the umbilicus. Attached to the greater curvature of the stomach was the contracted omentum, which formed the irregular substance commonly met with in such cases. The surface of the stomach had the yellowish white colour and leathery consistence with which every pathologist is familiar; this thickness increased towards the pylorus, which projected in the form of a tumour about three inches long, and two inches and a half thick. The stomach, when opened, was found to contain about two pints of liquid similar to that vomited during life. The finger, passed towards the pyloric orifice, met with firm opposition. The duodenum was then divided, about three inches below its origin, and a quantity of water was poured into the stomach, and made to gravitate towards the duodenum, by holding up the parts in a position favourable to its descent. Not a drop passed from the stomach through the pylorus. A section displayed the usual tortuous or serpentine course, the alternate projections and depressions being mutually accommodated to each other. The mucous surfaces were separated only by a thin layer of reddish mucus, which blocked up the passage. The mucous membrane, when cleared, exhibited a faint red colour; it was remarkably firm to the touch, but had no trace of ulceration, or breach of surface. The section exhibited the appearances usually described as hypertrophy of all the tunics and cellular tissue of the part. The liver, of moderate size, was, in colour, a pale brown, and, at first view, appeared to be free from morbid deposit; at length, on careful inspection, a yellow spot, slightly elevated, and not more than one-eighth of an inch in diameter, was discovered on the upper portion of the left lobe. A section showed this to be a very small tuber of the kind, which, when of larger size, is generally called Farre's tuber. Numerous sections were made, in every direction through the liver, but no second specimen was met with. The spleen was rather small, and without deposit; the kidneys were healthy. Nothing remarkable in the loose viscera.

The chest contained no trace of organic disease. The left ventricle of the heart was full of blood, as might be expected, from the mode of death. The organ was small, and had no valvular lesions.

*Histology.*—Dr. Aldridge was so obliging as to examine the specimens. Those from the pylorus and omentum exhibited the ordinary structures of white tissues, consisting of loose fibro-areolar tissue, traversed by dense, whitish bands, and containing fat. The specimen from the liver consisted of soft fibro-areolar tissue, full of milky juice, which, under the microscope, was seen to abound in irregular-shaped dotted cells, larger than pus globules, and mixed with oil-drops.

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The morbid anatomy of this case is full of suggestive matter, but we shall have other occasions for using the materials it supplies. The question of the separate existence *of stricture of the pylorus without cancer*, has been ably treated by M. Andral; and I published, several years ago, researches made in this hospital, with a view to establish the differential diagnosis during life. Our concern, at present, however, is, with the practical fact, that certain phenomena, resulting from obstructive disease of the pyloric orifice of the stomach, may simulate a case of ileus, and may, if seen for the first time, and without a clear history of their development and progress, be readily mistaken for that disease.

## JERVIS-STREET HOSPITAL.

### *Erysipelas; its Clinical History and Treatment.*

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[Continued from page 91.]

### PART III.

### *Treatment of Erysipelas.*

A great diversity of opinion has existed as to the mode of treatment that should be adopted in true erysipelas, and many who have written on the subject have, by lauding some particular curative plan of their own, as applicable to almost every form and variety of the disease, led, but too frequently, to embarrassment of the student, and to erroneous treatment on the part of the practitioner. In the management of true erysipelas, however, you must not permit yourselves to be carried away by any uniform or exclusive line of treatment, but must, in each case of the disease entrusted to your care, be guided in the selection of your remedies by the age, constitution, and habits of life of the patient, and by the type of the accompanying fever.

The treatment of true erysipelas is conveniently divided into local, and constitutional, and, as the latter is of the greatest importance, we shall take it first into consideration.

General bloodletting has been advocated by some authors, in the early stage of true erysipelas, and, although venesection may, perhaps, in some rare cases, especially in provincial practice, be justifiable in the very onset of the disease, if the patient be young and plethoric, and if the local inflammation and constitutional disturbance should run very high, yet in the varieties of erysipelas now prevalent in this city, in which the high degree of feverish excitement, which usually ushers them in, is soon followed by an asthenic or typhoid state, bloodletting is obviously contra-indicated; and, indeed, these remarks are equally applicable to the forms of erysipelas which, for years past, we have met in this metropolis, whether in the wards of our hospital or in private practice.

In the commencement of true erysipelas, when the pulse is hard and full, and when there is much heat of surface, but an absence of gastro-intestinal irritation or inflammation, the early exhibition of an emetic generally constitutes the first step in our treatment, and it almost invariably proves beneficial; for, we find, that when the stomach is, in this way, unloaded, the pulse becomes softer and less frequent, the heat of the surface, at the same time, being sensibly diminished. It is, however, only at the very onset of erysipelas that emetics can be administered with safety; but, when so given, they have, in many cases lately under our observation, as, for instance, in that of Byrne, assisted in arresting the disease. The medicine which we generally use to produce emesis is the tartarized antimony, either alone or combined with ipecacuanha; as soon as the emetic action is over, we usually employ the tartarized antimony in solution, in minute doses, at long intervals, as recommended by Desault, with a view of determining to the surface; for we find the greatest advantage, in this incipient stage of the disease, in maintaining a steadily increased action of the skin. At other times, after the emetic action has subsided, and where we apprehend that the depressing influence of the antimony may, perhaps, prove injurious, we order diaphoretic mixtures, containing either the citrate or acetate of ammonia. I may here mention that some authorities consider aconite and belladonna important remedies in erysipelas. Thus, Mr. Erasmus Wilson, in his work on Skin Diseases, says: "Both of these remedies act by reducing the excitement of the arterial system, and procuring rest; the extract of aconite is especially useful in checking the heart's action and promoting cutaneous transpiration; and, for this purpose, should be administered in half-grain doses, every four hours." Mr. Liston remarks, "that after the aconite has performed its office, the extract of belladonna, in doses of one-sixteenth of a grain, is productive of the most beneficial effects."

When, in erysipelas, the bowels are in a torpid condition, a suitable aperient should be given. In cases in which the biliary organs are deranged, the exhibition of calomel or some other mercurial preparation, followed by a mild purgative, always proves useful; when the erysipelatous inflammation and fever subside, and the tongue becomes clean, we usually place the patient on the bark mixture in effervescence, and order him light, nutritious diet; if, on the other hand, the fever assumes a low asthenic or typhoid form, which it did, for instance, in Robertson's case, from the very onset of the attack, we have early recourse, and, in general, with marked benefit, to the administration of wine, brandy, ammonia, and other stimulants, together with light and suitable diet; in these cases, when, by the tongue becoming moist and clean, an approach to health is indicated, we find great advantage in the exhibition of bark and quinine.

There is no question of greater practical importance than the period at which the administration of stimulants should be commenced in erysipelas. Some physicians give wine, in all cases of the disease, from the very outset. Thus, Dr. Robert Williams, of London, says:—"The mode, then, in which I am in the habit of treating idiopathic erysipelas, whatever may be the part affected, or with whatever symptoms it may be accompanied, is as follows: The patient is put on a milk diet, the bowels gently opened, and from four to six ounces of port wine, together with sago, allowed daily. This mode of treatment it is seldom necessary to vary throughout the whole course of the disease; for the delirium, if present, is generally tranquillized; if absent, prevented; the tongue more rarely becomes brown, or only continues so for a few hours; while the local disease seldom passes into suppuration or gangrene; in a word, all the symptoms are mitigated, and the course of the disease shortened. I have pursued this system for several years, and I hardly remember a case in which it has not been successful."*

In the administration of wine in any given case of erysipelas, you ought, however, in my mind, to be guided, both as to the period of giving it and the quantity required, by the age, constitution, and habits of life of the patient, and by the type of the fever; thus, if you are called in the early stage of the disease, and if a high degree of fever exists, instead of pouring in wine at once, you should first unload the stomach and bowels by suitable medicines, and exhibit diaphoretics, after which wine may, according to my experience, be given, with greater safety and advantage; if, on the contrary, this first stage should have lapsed, or that the attack has been ushered in by a low form of fever, the sooner you order wine the better.

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* "Williams on Morbid Poisons," vol. i. page 284.

In some cases, lately under our observation, we found six or eight ounces of wine during the twenty-four hours, sufficient; whereas, in others, as you are aware, it became necessary to order more than double that quantity within the same period. In hospital practice, where the patients have been more or less accustomed to the use of ardent spirits, we have found brandy, or malt whiskey, in suitable quantities, to be better stimulants than wine. In cases of erysipelas in which the patient loses his power of swallowing, liquid food should be introduced into the stomach by means of the œsophagus tube; or, nutritious and stimulating enemata should be administered to him at proper intervals; for, we should ever hold in recollection, the possibility of persons recovering from this disease under the most unpromising circumstances. And here, let me impress on you the vital importance of sedulously watching, in all these cases, the state of the patient's bladder. In my first lecture I told you, that although patients in the advanced stages of erysipelas frequently labour under incontinence of urine, yet, that retention of urine sometimes occurs in the latter stages of the disease; therefore, examine the condition of the patient's bladder, at each of your visits, not trusting to the nurse's report, who may, possibly, mistake stillicidium urinæ for incontinence of urine; and should retention have taken place, you will, of course, introduce a catheter to unload the bladder, and have the operation repeated at proper intervals.

Bronchitis was, as you are aware, a prominent symptom in Austin's case, and in him we found support of the system by wine and light nourishment, in judicious quantities, as necessary as in the low forms of external erysipelas. In this variety of bronchitis, the application of sinapisms and blisters proved highly beneficial.

In the local treatment of the lighter forms of true erysipelas, the application of finely levigated flour, or hair powder, affords much comfort to the patient; in some instances, especially, when the disease is situated in the lower extremities, the use of the nitrate of silver, as recommended by Mr. Higginbotham, appears to limit the disease; in more severe cases, where the vessels of the skin are in a highly congested state, puncturing the surface freely with the lancet, as proposed by Sir Richard Dobson, affords relief; in a few instances, we have found the solution of sulphate of iron, as recommended by M. Velpeau, apparently of some advantage; and both Dr. Snow, of London, and Mr. Busk, of the Dreadnought, speak favourably of the employment of collodion to the surface of true erysipelas.

The topical remedy, however, which proved especially useful in the most unpromising cases of the prevailing erysipelas, was the employment of mercurial ointment to the inflamed surface; in proof of which, I need only refer you to the cases of erysipelas of the face and head, which you have seen successfully treated, on this principle, within the last month, by Dr. Power, my colleague on duty, and myself. The mercurial inunction requires to be used in these cases with considerable caution; the diseased surface should be covered with the ointment, and the application renewed at proper intervals; but, if we do not watch the effects of the inunction with care, the patient may, to our great annoyance and his discomfort, become suddenly hyper-salivated: in Robertson's case, three drachms of mercurial ointment had scarcely been used to the face and forehead, in divided portions, and at short intervals, when salivation set in, but from that moment all his symptoms improved, although we had previously looked on his case as one of the most unlikely to recover that we had met with during the session. Whilst using the mercurial ointment, externally, in erysipelas, we must not lose sight of the constitutional treatment; thus, in Austin's case, already alluded to, whilst we were carrying out the treatment by mercurial inunction, wine, and bark in effervescence, together with beef tea, were freely given, to support his strength, which, at the time, was rapidly sinking. The merit of having first recommended mercurial inunction in erysipelas, although attributed by some to the French surgeons, is, we believe, due to Messrs. Dean and Little, of New York. Dr. Dean published a paper on the subject in the *American Recorder*, as early as July, 1820; but to some of our French brethren we are chiefly indebted for the general introduction of this valuable mode of treatment. In Dublin, the mercurial ointment was used soon after its advantages had been tested in the Parisian hospitals, by the late Dr. M'Dowel, Mr. Reid, and others. It is right to state, that pure creasote has been extolled as a local application in erysipelas, by Dr. Fahnestock, of Pittsburg, and that it has been tried by others, and, as it has been asserted, with the best results. We cannot at present speak, from our own experience, as to the value of creasote in erysipelas, but we purpose to give it an impartial trial, and to note carefully its effects.

In the management of phlegmonous erysipelas, your chief reliance must be placed in local treatment. This form of the disease almost invariably terminates in the formation of matter, and destruction of the subcutaneous areolar tissue to a greater or less extent; and here nature unassisted is not equal to form a timely outlet for the matter; instead, therefore, of having recourse to temporising measures, such as cold lotions, leechings, &c., you must endeavour, by early and efficient openings, to afford a free exit for the suppuration and dead areolar tissue. By this mode of treatment we often are enabled, as in Walsh's case still under observation, to completely arrest the destructive process soon after it has commenced. In phlegmonous erysipelas the incisions should, as a general rule, be made in those parts of the limbs where the tension appears to be greatest. In the instances lately under our care, however, we did not, as you observed, carry our incisions to the unlimited extent formerly recommended by some authorities. In ordinary cases we found one or two openings of between two and three inches in length, and of a suitable depth, quite sufficient to afford the necessary relief. In no case did we leave our patient's side, after having made deep and long incisions in phlegmonous erysipelas, until the bleeding from them had been completely arrested; for fatal terminations have occasionally followed the loss of blood from such incisions. Should the bleeding in such cases prove troublesome, you must have the limb placed in an elevated position, and dress the wound from the bottom, either with dry lint, as in Walsh's case, or with lint steeped in spirits of turpentine, Ruspini's styptic, or a strong solution of gallic acid, by which means, together with the light pressure of a well-adjusted bandage, the hæmorrhage will, in general, soon cease. In some few cases of bleeding from the incisions made in phlegmonous erysipelas, it has been found necessary to apply a ligature or torsion to one or two bleeding vessels; in the generality of such cases, however, the blood comes from innumerable small vessels, constituting, in fact, an oozing from the cut surfaces. After having made suitable incisions in phlegmonous erysipelas, fomentations and poultices should be assiduously applied to favour the detachment of the dead cellular tissue; when, in the process of time, the sloughs are thrown off, the poultices should be laid aside, and the ulcers should be dressed with suitable applications; the many-tailed bandage may then be lightly applied to the entire limb, so as gently to approximate the edges of the ulcers, and thus expedite the patient's recovery. This plan of treatment has been carried out in M'Namara's case with considerable advantage. In some cases of erysipelas you may be called on to make incisions into collections of matter in or about the face; as, however, incisions into the eyelids are sometimes followed by permanent deformity, you should, if possible, avoid them. We have in more than one case lately succeeded in stimulating the absorbents to remove collections of matter in the eyelids, by repeated applications of the compound tincture of iodine, applied carefully, by means of a camel's hair pencil, to the superincumbent integuments; we can, therefore, strongly recommend the adoption of this practice.

When suppuration is established in phlegmonous erysipelas, the patient's strength must be supported by light diet, wine, &c. Should delirium tremens evince itself, as it did in M'Namara, it then requires to be combated by suitable treatment. In M'Namara's case you recollect that we succeeded in tranquillizing his nervous system by the administration of full opiates, at proper intervals, together with brandy, to the free use of which he was accustomed.

When, in extremely neglected phlegmonous erysipelas, the destructive process has committed great ravages, the bones being laid bare and the joints opened, the patient's strength will gradually decline under the drain and constitutional disturbance, unless we come to his relief. In such cases it therefore becomes an imperative duty to propose amputation of the limb, as the only chance of saving life.

In the treatment of superficial erysipelas of the head, whether of the idiopathic or traumatic forms, we must be guided, as in true erysipelas elsewhere, in the selection of our remedies, by the age, constitution, and habits of life of the patient, and by the type of the accompanying fever. In not a single case of the disease lately presented to our notice, did we consider we were justified in having recourse to either general or local blood-letting. Here, when the pulse was hard and full, and that there was much heat of surface, we found, as in Byrne's case, the early exhibition of an emetic (unless contra-indicated by the state of the stomach and bowels) highly advantageous. Here, as in true erysipelas of other regions, when the biliary system was deranged, we found the exhibition of calomel, followed by saline medicines, beneficial. In many of the cases of erysipelas of the head lately in hospital, when the fever assumed a low typhoid character from the onset, we gave wine or brandy from the very beginning of the attack, and with the best results. It was in these severe and dangerous forms of erysipelas of the face and head that we found the employment of mercurial inunction of the greatest service.

When, in erysipelas of the head, symptoms of inflammation of the parts within the cranium evince themselves, no time should be lost in bringing the system as rapidly as possible under the full influence of mercury; the further treatment of such a case must, of course, be conducted in accordance with the age and constitution of the patient. Thus, if he is young, vigorous, and plethoric, which seldom is the case, general blood-letting may be called for; in some cases leechings to the temples or behind the ears may be requisite; but as in the majority of the cases met with in metropolitan practice, whether in or out of hospital, the patient cannot afford to lose blood, our local treatment must chiefly consist in the application of blisters to the vertex or nape of the neck, and sinapisms to the calves of the legs, &c.

In the deep-seated form of erysipelas of the scalp, recourse must be had to early and efficient incisions, by which, as in Bateson's case, for instance, almost instantaneous relief will be afforded both to the local and constitutional disturbance. In these cases the incisions should be made in the transverse direction, at right angles with the fibres of the occipito-frontalis muscle, by which means the lips of the wound will be kept apart, and a free outlet for the matter thus secured.

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## MEATH HOSPITAL.

### *Clinical Lectures on Diseases of the Kidneys.*

BY DR. LEES.

[Continued from p. 58.]

### *Cerebral and Paralytic Complications occurring in the Course of Bright's Disease.*

We have next to consider the effects of this disease on the nervous system, as our patient states that, when apparently in good health, he suddenly fell, and remained in a state of unconsciousness for some time; on recovering he found that he had lost all power of motion in the right arm and leg, and also of the upper eyelid of the same side. He soon regained the use of his limbs, but the paralysis of the eyelid continues still. Cerebral attacks are so very frequent in this disease, that Dr. Christison considers death by coma as its natural termination; they assume different forms, but are all classed under the generic term, Uræmia, which is meant to express a certain train of symptoms caused by contamination of the blood with the excrementitious constituents of urine. The attack may commence by sudden coma, the face being pale, pupils dilated, pulse ranging from 60 to 90, and the stertor having often a prolonged hissing character; in other cases it assumes the form of epilepsy, particularly when occurring in typhus fever, or in females about the full time of pregnancy, when it is classed under the term puerperal convulsions; while in other cases it causes at first merely partial and temporary paralysis, as occurred in the case of a lady whom I attended some time ago with Dr. Johnson. She had been attacked with puerperal convulsions a year previously, but had made apparently a good recovery, and was able to mix in society as usual, though, on close investigation, she admitted that she suffered at her menstrual periods from vertigo, indistinctness of vision, and sick headaches. Her urine all this time was persistently albuminous, of low specific gravity, very deficient in urea, and presenting well defined casts of the uriniferous tubes, though there was no dropsical effusion in any part of the body. While in this condition, and apparently enjoying a fair state of health, except (as she said) being a little bilious, she one day perceived in the looking-glass that her face was crooked, and being alarmed sent for me. I found the mouth drawn to the right side, the upper eye-lid in constant motion; she had no pain in the head, no defect of vision, nor had the attack been preceded by any peculiar symptom; her pulse was regular but rather feeble. She recovered rapidly from this attack under the use of mercury, and was apparently in her usual state of health, when, in about a month afterwards, she was heard vomiting at night, convulsions set in rapidly, and she died comatose in a few hours. In another case which came under my observation:—A gentleman, about fifty years of age, had an attack of hemiplegia in the country, but quickly recovered the use of his limbs; as his speech continued to be affected, he was supposed to be still suffering from the effects of an unabsorbed clot in the brain, and came up to town, when Mr. Newland brought him to me. The temporary form of the paralysis led me to examine his urine, which was highly albuminous, and we also found that it presented the characteristic appearance of confirmed granular degeneration of the kidneys, when examined under the microscope; we, therefore, gave a very unfavourable prognosis, which was confirmed on the next day by Sir H. Marsh, who saw him in consultation with us; and our opinion was unfortunately soon verified, as in a few nights after our first seeing him, he was suddenly attacked with convulsions, and died in three hours, though he had gone to bed in good spirits, saying that he felt better than he had been for a long time previously. These cases show the necessity of caution in our prognosis of patients suffering from granular degeneration of the kidneys, as their lives hang on a thread. There is one point of great importance in diagnosis with regard to the paralysis in such cases, namely, its temporary nature, in which it differs materially from that form dependent on apoplexy, or disease of the brain, so that wherever you meet with a case of paralysis, in which the patient has recovered the use of his limbs rapidly, always examine the urine carefully, as it will often prove a valuable guide to your diagnosis, prognosis, and treatment. Dr. Latham is the only author, as far as I know, who has alluded to this peculiar character of the paralysis occurring in connexion with albuminous urine, for in speaking of the many and various classes of disease with which we find albuminous urine coincident, he says:—"To come to particular organs, as the brain: some of its smaller affections will put on a peculiar character of permanence and intractability, without further evidence of harm to its own structure; vertigo and pain will be abiding, and incurable, and incapacitating, while the urine is albuminous. And some of its graver affections will come and go, and admit of a present relief, which is unusual when harm has befallen its own structure; convulsions and apoplexies appear and disappear, and yet are ultimately fatal, the chief concomitant circumstance which attracts our notice being albuminous urine."* In most cases these cerebral attacks are preceded for some days by headach, vertigo, indistinct vision, drowsiness, vomiting, and sometimes by amaurosis; but in others, convulsions and coma give the first notice of the disease. You ought to be aware of this, as also that the sudden supervention of convulsions or coma is especially liable to occur in those cases of albuminous urine, in which there is little or no dropsical effusion externally, and where there is but a moderate deposit of albumen in the urine. It is in such cases as these, when persons have died suddenly, under suspicious circumstances, that death has been attributed to narcotic poisoning, the symptoms being such as to direct attention to the head exclusively, and the condition of the kidneys is often overlooked. A little attention will, however, in most cases, prevent you making this mistake; for, in the coma caused by this disease, you will almost always find the face very pale, anæmic, and the pupils dilated, just the reverse of what usually is seen in cases of death caused by opium. You will also find, on inquiring into the history of the case, that, although they complained of the head, yet there were also pains in the loins and down the limbs, with symptoms of dyspepsia—often nausea and vomiting. I lately saw an interesting case illustrative of these observations, in consultation with Dr. Hamilton Labatt; we were both sent for, late in the evening, to see a young married lady, whom we found in a state of coma, which terminated her existence in a few minutes after our seeing her. She had not been previously attended by any professional person, so that at first we felt rather uncertain as to the true nature of the case. Her husband stated that she had suffered from occasional sickness of stomach for the last few months, which he supposed might have depended on pregnancy, but that on that day she had been as well as usual up to six o'clock, when she vomited, that she soon after became drowsy, and gradually passed into a state of coma, when be became frightened, and sent for us. If we had been unaccustomed to the appearance of persons dying of this disease, the circumstances of the case might have warranted us in suspecting that death had been caused by some narcotic poison, as here was a young person dying in a state of coma within a few hours after appearing in her usual health; but her very pallid aspect, and the largely dilated pupil made us regard it as a case of death from uræmia, and subsequent inquiries confirmed our opinion. Dr. Addison states that, in this form of coma, the stertor is usually attended with a peculiar hissing expiration; and Dr. Frerichs asserts that you can detect ammonia in the breath of these patients, by holding a rod dipped in muriatic acid to their mouth, when white clouds of muriate of ammonia will be formed. I have tried this test in some cases, but I do not place much value on it. These cerebral attacks are generally attributed to the presence in the blood of urea, which not being eliminated by the kidneys, exercises a poisonous influence, not only on the nervous, but also on the general system, and hence all the secondary affections, which occur during the course of this disease, are classed under the term uræmia; but this explanation is not quite sufficient to account for them, as persons have lived for a long time without presenting any of these symptoms, though urea was retained in the system. Of this you have lately had a good illustration in the case of the woman suffering from cancer of the uterus, under the charge of Mr. Usher, and who lived for a fortnight without passing any urine, yet presented no symptom of uræmic poisoning. A remarkable case was lately brought before the Pathological Society by Dr. Beattie, in which there was complete suppression of urine for three weeks before death, and yet the patient presented no cerebral symptoms, but died of acute pericarditis. In this case the cancerous disease had extended from the uterus to the bladder, blocking up the orifices of the ureters, and completely preventing the passage of urine. As it is true, that there is generally a very scanty secretion of urine preceding these cerebral attacks, and that urea has been detected in the serum of the ventricles of the brain, as occurred in a remarkable case exhibited at the Pathological Society by Dr. Banks, it is highly probable that such attacks are consequences of the morbid state of the blood, resulting from imperfect urinary excretion, yet the immediate cause is still doubtful. Dr. Watson suggests that the diminished density and watery condition of the blood may account for their occurrence, and that they are owing to an anæmic state of the brain, analogous to the affection described by Dr. Gooch as simulating cerebral disease in infants; but it is more probable that they depend on some peculiar idiosyncracy of the individuals attacked, as we see them affected in so many different ways, in some the heart, in others the lungs, in others the bowels being the parts engaged. Dr. Frerichs has lately asserted that these symptoms are caused by the presence of carbonate of ammonia in the blood, the result of decomposition of urea in the blood-vessels; but in order to account for this decomposition of urea occurring in some cases and not in others, he assumes the existence of some peculiar ferment, which, therefore, still leaves a link deficient in the chain of causation.

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* At a late meeting of the Association of the College of Physicians, Dr. Churchill detailed some interesting cases, in which albuminous urine occurred in conjunction with "Paralysis during Gestation and in Childbed."—*Vid. Dub. Quart. Journ.*, May 1st, 1854.

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## PROLAPSUS OF THE RECTUM, SUCCESSFULLY TREATED BY THE LOCAL APPLICATION OF NITRIC ACID.

BY DR. M'DOWEL,

PHYSICIAN TO THE WHITWORTH AND HARDWICKE HOSPITALS, ETC., ETC.

In the month of January last one of the inmates of the Hardwicke Lunatic Asylum (of which I have the medical superintendence) was brought under my notice, on account of a prolapsus of the rectum. The protrusion, from being occasional, had become permanent, and the patient's health had suffered greatly in consequence. Considering this a good opportunity of testing the value of the treatment by the local application of nitric acid (of which an interesting case is contributed by Dr. Fleming in the third Number of this Journal), I requested Mr. John Sheil, my clinical clerk, to take charge of the case, and by him the treatment was carefully and, as the result proves, successfully conducted.

Any treatment which could have achieved a cure, under circumstances so unpromising, and in a patient who, owing to mental disease, did everything she could to render that treatment abortive, is deserving the attention of the profession.

### *Case reported by* MR. JOHN SHEIL.

Bridget Brennan, æt. 50, an inmate of the Hardwicke Lunatic Asylum for the last five years, was placed under medical treatment in January, 1854. From the patient herself, owing to her state of mind, no history of her disease could be obtained. The nurse stated that the patient had always been a healthy woman from the time of her admission, until about ten months ago, when she became subject to prolapsus of the rectum. At first the prolapsus occurred only when the patient was at stool, and the bowel would remain protruded until returned by the finger. After a short period, however, the protrusion occurred whenever the patient stood up, or made any exertion. Attacks of inflammation of the protruded mucous surface soon became of frequent occurrence, which rendered difficult the return of the bowel, and added greatly to the patient's sufferings. A purulent and muco-sanious discharge had become established, and proved a source of great discomfort. In fact, at this period, it was found necessary to keep the patient in bed, which, for the last six months, she had scarcely quitted.

The protrusion had become permanent, and occurred to the extent of about four inches; it could be replaced with facility, owing to the relaxation of all the structures, but returned almost immediately, even when the patient lay in the recumbent position.

Various means had been employed, but without benefit, when, by Dr. M'Dowel's directions, the treatment by strong nitric acid was commenced. At this period the integuments over the sacrum had begun to slough from the constant confinement to bed, which the unhappy condition of the patient rendered unavoidable.

The acid was first applied on February 16. Four white tracks were made with the acid in the vertical direction from the sphincter, down to the lowest portion of the protrusion; the bowel was then replaced; no protrusion occurred for two days afterwards. The acid was applied twice subsequently at intervals of seven days, and on the last occasion with the most complete success.

April 2.—Eight weeks have elapsed without any return of the prolapsus, and the patient, previously bed-ridden, suffering from bed sores, and debilitated in health from long confinement and want of exercise, is now able to go about as usual, and is restored to a state of health which she has not enjoyed for a very long time.

The treatment occupied a period of about three weeks.

April 29.—There has been no recurrence of the disease.

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## TREATMENT OF CHOLERA BY OXYGEN GAS.

*Communicated by* DR. O'BRIEN, *Calcutta.*

"Since my last communication I had a successful case of cholera two days ago in a female, the wife of a Mahomedan, who at first, though gasping for life and with most violent cramps, would not allow me near her; but at the husband's request I gave her the gas by force, and after she had inhaled it, she at once consented to permit me to treat her, and also asked to have more of the gas the moment its inhalation was discontinued. She inhaled it four times, for about five minutes each time, and when I left the house she was warming, and her pulse was quite distinct, although when I first saw her she was as cold as ice, and entirely pulseless. She was quite well on the third day."

The above notice of the successful treatment of a case of cholera, by oxygen inhalations, which we received from Dr. O'Brien, appears worthy of special attention, as he has found it to exert a marked beneficial effect over the disease, even under the most unpromising circumstances. In his former communication on the same subject, published in the first Number of the Gazette, he mentions his experience of other modes of treatment, and of that by oxygen gas, and states, that the oxygen gas treatment is that upon which he places most reliance.

## PATHOLOGICAL SOCIETY MEETINGS.

### *February 25th.*

Dr. HUTTON in the Chair.

### *Rupture of the Chordæ Tendineæ.*

Dr. Gordon related the following interesting case, and exhibited the preparation illustrative of this lesion. A woman, twenty-six years of age, was admitted under my care into the Whitworth Hospital, complaining of violent hæmoptysis. She gave the following history of her illness: She had led a very intemperate life, and suffered a long time from palpitation and uneasiness of the heart. Three months before admission she was seized with violent pains in the epigastrium, so severe that she fainted, and did not recover for some time; and, since that period, she had always complained of violent palpitations, and had two or three attacks of hæmoptysis: she was very pale and blanched, and was labouring under all the symptoms and physical signs of permanent patency; she had plainly visible pulsations in the extremities, and *frémissement* at the root of the neck, and over the præcordial region, where an intense *bruit de soufflet* was audible. I could not say where this bruit was most intense; it was audible over the entire chest, anteriorly, and even posteriorly. I stated that I considered it to be a case of permanent patency; but, from the sudden and violent pain in the region of the heart, followed by intense palpitation and weakness, and from the decided character of the bruit, and fremissement, I considered there was a rupture of the chordæ tendineæ of the heart. She lived ten days after her admission, and then sank. On examination I found very slight disease in the aortic valves; there was a slight deposit in the central valve; several of the chordæ tendineæ of the anterior portions of the mitral valve were ruptured, and covered with a soft cheesy matter. On removing the heart, it presented somewhat the appearance of a case of well-marked permanent patency, the thickness of the walls being considerable, and the apex rounded off, and formed completely by the left ventricle; there seemed to have been slight endocardial inflammation, followed by rupture of the chordæ tendineæ, and this, by the effusion of lymph, which lay in great quantities loose in the ventricle. The difficulty is to account for the physical signs so closely simulating those of permanent patency; the visible pulsation was very well marked, and the bruit was audible in the arteries of the neck. The most probable explanation is, that the blood of the left ventricle was allowed to regurgitate through the ruptured valve into the left auricle, which was greatly dilated. The immediate cause of death was pulmonary apoplexy.

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### *March 4th.*

No meeting held of the society.

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### *March 11th.*

Dr. FLEMING in the Chair.

Dr. Lees exhibited a stomach and liver, taken from a patient who died in the Meath Hospital, deeply jaundiced; a large cancerous mass surrounded the cardiac orifice of the stomach, and a perforation existed along its lesser curvature; there were also cancerous deposits in the liver, and distention of the gall-bladder. This case will be published in a future Number of this Journal.

### *Endocarditis; Patency of Mitral Orifice.*

Dr. Thomas Brady showed the preparation. The patient, a man aged thirty-seven, had been under his care in hospital during the last three months of his life, and presented, in a very characteristic form, the physical signs and general symptoms of a weak heart, with permanent patency of the left auriculo-ventricular opening. He had been long a soldier, and served in India, where he suffered much from sickness, and was discharged from the army about five years since for general debility. His health had never improved, and he had gradually grown weaker and weaker. During the first two months in hospital he suffered chiefly from occasional distressing paroxysms of a pseudo-anginal character, which was usually followed by severe dyspnœa, passing at times into complete orthopnœa, lasting for several hours. In the beginning of the third month the peritoneal cavity began to be distended with fluid, the lower limbs became anasarcous, and, in proportion as the effusion increased, the chest symptoms diminished, so that he was able to lie down in bed without any inconvenience. He died quite suddenly, while lying thus in bed.

The heart was enlarged and flabby; all its cavities were dilated and thinned, especially the left ventricle, the walls of which were not half their normal thickness. The endocardial lining of the upper or basic half of this ventricle was converted, throughout almost its entire extent, into a dense, firm, fibrous membrane, which was perfectly smooth, of a dull white colour, above a line in thickness, and could be readily peeled off from the subjacent muscular structure.

Neither the mitral valve, its tendons or muscles, were involved in this disease; they were perfectly normal; but the auriculo-ventricular opening was greatly enlarged, so that the valve, which had undergone no corresponding increase in size, was obviously incompetent to close it. Hence, the regurgitant disease in this case depended not on any defect in the valvular apparatus, but on dilatation of the opening, an exceedingly rare cause of regurgitation at the mitral orifice. The calibre of the aorta was smaller than natural; both the vessel and its valves were healthy. The lungs were greatly congested, and contained scattered nodules of pulmonary apoplexy. The liver was diminished in superficial extent; but enormously increased in thickness, its loose edge being above an inch thick; it was firm, though not hard or nodulated.

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## SUMMARY.

*Test for Strychnine.*—Dr. E. W. Davy proposes the following method for detecting strychnine and its salts:—To a little of the strychnine add a drop of undiluted sulphuric acid, so as to moisten it, then a little ferrid-cyanide of potassium (red prussiate of potash), either in powder or in a strong aqueous solution, and mix them well together, when a fine deep violet colour will be immediately produced. This test is so delicate that a quantity of strychnine less than 1-1000th of a grain will afford an intense violet hue which can be extended over a considerable surface. Even with 1-50,000th part of a grain it yields a characteristic, though faint violet shade. Dr. Davy considers this test preferable to the action of vitriol and bichromate of potash upon strychnine, as proposed by M. Lefort, the violet hue produced being less fugitive than that caused by the latter test, and also not so easily affected by the presence of organic matter.

*Torula Cerevisiæ (Yeast) in Diabetes.*—Dr. W. B. Herapath, in the *Association Medical Journal* for April 28, states, that the morbid product in diabetes is the presence of glucose or grape sugar, derived from mal-assimilation of the starchy elements of food, which, in this disease, is rapidly absorbed by the venous system, or more slowly by the lacteals, and excreted with an abundant quantity of water, from its highly diuretic action; that in healthy digestion it appears probable that starch, although previously converted by the saliva into glucose, is further metamorphosed in the stomach into lactic and acetic acids, the former preponderating; it is, therefore, evident, that in diabetes the conversion of the starch stops at glucose, which being abnormal to healthy blood, and appearing incapable of undergoing further metamorphosis in the circulation, and being useless in the formation of adipose tissue, and incapable of subserving to the process of respiration, is eliminated as an effete substance, constituting the most evident sign of the disease. With the view of preventing this arrest of the conversion of starch at the stage of sugar, upon which diabetes principally, if not entirely, seems to depend, he recommends yeast to be employed, presuming it would have an efficient action within the stomach, similar to its power of inducing fomentation in saccharine solutions out of the body. Under ordinary circumstances glucose at a temperature of 68° to 70° is converted into alcohol and carbonic acid, but if the action were to take place in the dark, in the presence of albuminous substances, and at a temperature of 98°, the products would be lactic and acetic acids, with possibly alcohol and carbonic acid.

Acting upon these views, Dr. Herapath placed a patient, in January, 1853, under treatment by yeast. Before commencing the administration of the remedy, he had been voiding urine of specific gravity 1044, and containing 850 grains of sugar in the imperial pint; within two days of the employment of this substance, the density fell to 1020, and the sugar to 300 grains per pint, and by steadily pursuing the same plan for six weeks, the sugar eventually disappeared altogether, the urine reassumed its healthy character, the patient lost all symptoms of his ailment, and regained his usual health and strength, and has since rapidly recovered his flesh.

The yeast was exhibited in the form termed German yeast, which is prepared on the Continent by expressing ordinary yeast in linen bags, by which means all the fluid parts are separated, and a semi-solid mass remains, consisting entirely of the active vesicular structure of the plant. Supplies of this yeast are sent regularly twice in the week to the London confectioners, packed in bladders, and keep fresh for some time. The dose was one tablespoonful twice or three times daily, in milk. At first it caused slight nausea or vomiting, with eructations probably of carbonic acid; by giving it after a meal these disagreeable symptoms all disappeared; it was further serviceable in removing the obstinate constipation which had previously existed, and in producing regular alvine discharges.

*New Modification of Syme's Amputation*, invented by Professor Pirozoff of St. Petersburgh.—This operation, which is described in one of the volumes of the "Zeitschrift für Wiener Aertzte," by Professor Schuh, who has performed it frequently with excellent results, is stated in the "Medical Times" for May 6th, to have been practised successfully on two cases in the Dantzig Hospital. It differs from Mr. Syme's operation in preserving the posterior portion of the os calcis, which is left to fill up the heel flap. The incisions are made exactly as directed by Mr. Syme: after performing the first from one malleolus across to the other, the operator need only prepare the integuments about a line or two backwards from the inferior surface of the os calcis; he then proceeds to the execution of the second incision across the front of the joint; the astragalus is next exarticulated, and the os calcis divided with the saw behind the posterior extremity of the astragalus, the posterior extremity of the os calcis being preserved in this proceeding, and the heel flap thus completely filled out by the bone. The saw is then applied to separate the malleoli, and a thin slice of the articular surface of the tibia, and the cut surface of the last named bone being brought into apposition with the cut surface of the os calcis, the skin flaps are accurately united by ligature. The advantages of this operation are stated to be: 1st, we obtain a longer stump than by Mr. Syme's method, and its extremity is firmer and better adapted for bearing pressure; 2ndly, the healing process takes place quicker than in Mr. Syme's operation, the cavity of the heel being filled by the bone; 3rdly, there is no danger of the heel flap being deprived of the necessary supply of blood, as it is easy to avoid dividing the posterior tibial artery high up in the wound. Of course this operation implies the necessity of the os calcis being perfectly healthy, at least in its posterior part.

*Poisoning by Chloroform.*—Mr. Hartshorne, of Brosely, reports the case of a child, four years of age, who drank from one to two drachms of chloroform, which he poured into a cup from a bottle lying on a dressing table; he then carried the cup down stairs, told his father he had taken some medicine, and walked into the kitchen and back, after which he complained of pain in his epigastrium, and desired to evacuate the bowels, but had no motion. Being subject to pain in his bowels, his mother used friction with her hand over his abdomen, when he exclaimed, "Oh, mamma, my head," and immediately his head dropped and eyes "set." It was now discovered that he had taken chloroform, and his father ran with him in his arms for a short distance to a surgery; the child vomited on the road; ten minutes elapsed from taking the chloroform until insensibility commenced, and twenty minutes more until Mr. Hartshorne saw him. The child's pupils were then contracted, his *breath smelt very strongly of chloroform*, and his breathing was laborious; the pulse full and quick, face pale, extremities rather cold; he vomited twice afterwards, but the food was not readily expelled from the mouth and pharnyx, and once he appeared to be dying of asphyxia; this was caused by a large piece of undigested food closing the aperture of the glottis, which was removed from the pharynx with the finger. No attempt at deglutition could be excited; the pupils became alternately contracted and dilated; the face livid and pale; the extremities warm and cold; the pulse at one time quick and full, at another scarcely perceptible; at length, strabismus came on, the eyes being turned upwards; the breathing became more and more stertorous, and he died in profound coma, three hours after taking the fatal dose. No *post mortem* examination was made; the body was kept for eight days, during which the *rigor mortis* continued, and the face, although pale when the child expired, had its usual florid colour. The treatment consisted in attempts to administer an emetic of sulphate of zinc, and to use the stomach pump, and in the application of sinapisms to the calves of the legs, ammonia to the nostrils, and leeches to the temples; artificial respiration was tried, and lastly a warm bath.—*Assoc. Med. Journ.*

*Detection of Blood Stains on Garments.*—Dr. Alfred Taylor has informed the writer, that he has employed pure glycerine in medico-legal inquiries, as a means of separating blood corpuscules, and has found it serviceable in that respect from its not drying: a property of that fluid of considerable practical importance in the examination of blood globules under the microscope, or by the help of a lens, as the globules are in nowise altered in size or form thereby.—*British and Foreign Medico-Chirurgical Review.*

*On the Use and Abuse of Potassa Fusa and Potassa cum Calce, in the Treatment of Uterine Disease.*—At a meeting of the Medical Society of London, on April 29, reported in the *Lancet*, Dr. Henry Bennet stated, that from some cases he had seen, he had reason to believe these agents were not always used in uterine affections with the caution they imperatively demand; he was, therefore, anxious to lay down more carefully the rules which ought to regulate their employment. After using for many years the potassa fusa or potassa cum calce paste, he has obtained cylinders made in the proportion of one of potash to two of lime, which do not deliquesce, and are nearly as manageable as nitrate of silver. The conditions of local uterine disease, in which caustic potash (or the actual cautery, the action of which he considers identical) was applicable, are, chronic inflammation, or inflammatory ulceration of the mucous membrane covering the cervix or lining its cavity, intractable to other treatment; chronic inflammatory hypertrophy of the cervix, also intractable to other means; and lastly, chronic inflammation of the body of the uterus, in which the potash is merely applied to the cervix to produce a derivative action, as we would apply an issue to the back in diseases of the spine. In the first class of cases, the potash is used to modify the morbid vitality of the diseased tissues, and to substitute a healthy reparative action instead. In hypertrophy, the elimination of a moderate sized eschar on the enlarged cervix is attended with acute congestion, or active inflammation of the subjacent hypertrophied tissues, and under its influence the latter soften and are absorbed; the object not being to destroy the enlarged cervix, but to procure its absorption. When applied to the cervical canal, the caustic reaches the mucous follicles concealed between the rugæ of the arbor vitæ, which are occasionally the seat of chronic inflammation, and resist every other mode of treatment. Although looking upon the use of caustic potash as one of the most valuable contributions ever made to uterine pathology, he wished it to be understood that he considered it should be used only when every other means, both local and general, had failed. If used cautiously there was no danger whatever incurred by the patient, but if incautiously or imprudently employed, serious results might follow; thus the inflammation produced in the cervix might pass to the uterus; he had also known the vagina compromised by the extension of the caustic to it, and had seen several cases in which the potash having been employed too freely to the cervical canal, the os, or canal, had been nearly obliterated by subsequent contraction, or by adhesion of its parietes. To prevent these, he advises practitioners never to attempt to destroy the hypertrophied cervix, as had been proposed, but to be satisfied to produce the eliminatory inflammation already described, to use the potassa cum calce cylinders, which do not deliquesce, and when it is applied to the cervical canal, to apply it very gently, and to pass a bougie through the canal once or twice a-week for six weeks after; by these precautions no fear of any accident need be entertained. He does not resort to this treatment in passive hypertrophy, either of the cervix or uterus, which he thinks may be safely left to time, nature, and general treatment. The use of potassa has been stated to produce indurated cicatrices of the cervix, which might impede subsequent labours; this he asserts is not the case; on the contrary, it removes induration, and thus facilitates parturition. Indeed, Dr. Bennet is becoming more convinced of the truth of a statement made by him many years ago, that rigidity of the os uteri in labour is nearly always the result of previous inflammatory disease.

*Pathology of the Teeth.*—The following remarks are taken from Professor Kölliker's "Manual of Human Histology," recently published by the Sydenham Society. "Permanent teeth which have fallen out are sometimes replaced by a third dentition; but it must not be forgotten, that the milk teeth occasionally remain beyond their time, and care must be taken not to confound a second tooth, late in its eruption, with a third. Teeth which have been extracted may be replaced (in fifteen months a canine tooth, which had been extracted in the upper jaw, was perfectly firm again). An abnormal development of the teeth takes place particularly in the ovarium, but also elsewhere. *Fractures* of the teeth may be reunited, when they occur within the alveoli, by imperfect dentine or cement. Regeneration of the worn-down parts takes place only in animals (as Rodent's) in which the teeth constantly grow. *Hypertrophy* of the cement (the so-called exostosis), deposits of dentine in the walls of the pulp cavity, and ossification of the pulp itself, are exceedingly common, and result from chronic inflammation of the *periosteum* and pulp. A partial disappearance of the fang is not uncommon. *Necrosis* of the teeth takes place when the periosteum has been stripped off, or the pulp has died; the teeth become rough and dark, even black, and finally fall out. The nature and causes of *dental caries* are doubtful; it attacks living and false teeth (Tomes), and always begins on the exterior, from Nasmyth's membrane (Ficinus), whence the fluids of the mouth have been supposed to have considerable influence upon it; it does not follow, however, that one living tooth may not be more disposed to it than another, being rendered less capable of resistance, either by its chemical composition or by the mode of its nutrition. Caries, however, is assuredly not a simple solution of the salts by the oral fluids, but a solution, accompanied by a putrefactive decomposition of the organic elements of the tooth, which becomes covered with infusoria and fungi; in fact, according to Ficinus's observations, the latter growths would appear to play the most important part, inasmuch as the decay of the teeth usually commences in those localities in which undisturbed opportunity is given to these organisms to develope, as in the cracks and pits of the enamel, in the depressions of the molar teeth, in the clefts between the teeth, but not where the dentine is otherwise exposed, as on the masticating surface, in filed places, &c. The usual course of caries is, that the discoloured spots of the cuticle of the enamel, covered with living and growing organisms, infusorial animalcules, similar to a vibrio, which Ficinus calls *denticola*, and mucedinous fungi (Erdl, Klenke, Tomes), similar to those which are found on the tongue, first loose their calcareous salts, and then break up into angular, cellular pieces, as if they had been treated with hydrochloric acid. The decay then penetrates through the enamel to the dentine, always first softening it, so that it yields not more than ten per cent. of ash (Ficinus), and then decomposing it. The dentine is more affected by this process than the enamel, its canal first becoming filled with the fluids proceeding from its decomposition, which may reach the pulp and give rise to pain, unless, as Tomes has found, the dentinal canals in the neighbouring healthy portions become obliterated by deposits, or the pulp is protected by new masses of dentine developed in the cavity. Eventually a brownish deposit takes place in the tubules, and then the intermediate substance becomes completely broken up. In this manner the process of decomposition extends further and further, until at last the crown collapses, the root also becoming dissolved, and finally falling out."

*Retinitis from undue Lactation.*—Dr. Mackenzie, in the *Glasgow Medical Journal* for April, gives an interesting description of this affection. He says, the most momentous part of this disease is really a chronic inflammation of the retina, yet almost all the other tissues of the eye may be involved, so that it might almost be set down as an ophthalmitis, were it not much more apt to terminate simply in amaurosis than in any such general disorganization as that to which this term should be appropriated. It may affect one eye only, but commonly both suffer; there is evident general irritation about the organs of vision; the lids are somewhat swollen and their edges red; the conjunctiva, especially its palpebral portion, is affected with catarrhal inflammation, generally slight, but sufficient to cause adhesion of the lids in the morning. There is often some rheumatic sclerotitis, with stinging pain in the eyeball and orbital region. The redness of the conjunctiva or sclerotica is rarely very considerable; the external part of the disease is apt to assume the form of phlyctenular conjunctivitis; then there is intolerance of light, and the cornea becoming involved, presents a small opaque deposition near its centre, which is apt to fall into a state of ulceration. The patient complains of muscæ volitantes, and of such dimness of sight that even the large letters of a title page cannot be distinguished; the loss of vision often proceeds to the length of preventing her knowing one person from another. The pupil is at first contracted, but after a time becomes somewhat sluggish and dilated, while the cornea and sclerotica are found to yield too readily to the pressure of the finger—one of the diagnostic marks of retinitis, upon which most dependence may be placed. The patient complains of debility and general ill health, and is somewhat emaciated; want of appetite, derangement of the bowels, rigors, headach, vertigo, a dragging feeling in the back, and a deficiency of milk generally attend the disease.

It is rare to find very young women affected; the subjects are generally above thirty, have had several children, and nursed them long: when they begin to complain they have almost always been nursing for some months, but the disease may occur soon after commencing to nurse, or not till after weaning. They are often of a scrofulous or rheumatic diathesis, and not unfrequently have suffered, before marriage, from chlorosis, or been weakened by hæmorrhagic or leucorrhœal discharges. Fatiguing themselves much with their infant, supporting it almost entirely by their milk, allowing it to suck during the night while they themselves are asleep, not taking a sufficiently varied, digestible, and nutritive diet, but living exclusively upon such articles as tea and bread, and attempting to keep up their strength by alcoholic drinks, are frequent circumstances in their cases. Overworking of the eyes in sewing, and the like, want of rest during the night, anxiety of mind, and the like causes, often conspire, with prolonged or undue lactation, to produce the disease. Months, and even years, may elapse, with the best care and treatment, before the symptoms are overcome, and distinct and strong vision restored.

In respect to treatment, the first thing to be done is to give up nursing; without this other things will be of little or no avail; notwithstanding the general debility, we cannot overlook the signs of local congestion, reaction on the organs of vision, and actual inflammation of the retina. General bleeding is out of the question, but the symptoms are often such as indicate the taking of blood from the temples by leeches or by cupping. Counter-irritation by small blisters behind the ear, to the temple, or on the forehead, will be proper. Pledgets, wrung out of cold water, laid over the eyes and applied to the forehead and temples, give great relief.

The bowels having been emptied by a laxative, some mild mercurial, as blue pill or hydrargyrum cum creta, ought to be administered, along with small doses of sulphate of quina, twice or thrice daily, till the gums are touched.

The vision clearing under these remedies, the chief indications will be to restore tone to the system by the cautious use of chalybeates and other tonics. The patient should adopt a mild, nutritious diet, partly animal, partly vegetable, but avoid, in general, wine, ale, and spirits; the bowels must be carefully regulated, and perfect exemption from fatigue, hurry, and disturbance should be enjoined. The eyes must be rested, and employed in no trying occupation; exercise out of doors, and country air, are important auxiliaries in the cure. The external symptoms which so frequently accompany the disease, require the use of the means commonly recommended for ophthalmia tarsi, phlyctenular conjunctivitis, and corneitis; many of these symptoms are relieved by the use of a collyrium, containing extract of belladonna or sulphate of atropia. As the disease subsides, advantage is obtained from dropping occasionally on the eye diluted vinum opii.

*Influence of Variola on Vaccination practised during the Incubation of the Eruptive Fever.*—In this inquiry the important practical question is raised, if vaccination ought to be performed when an attack of small-pox is imminent? The general opinion prevails that variola coming on during the course of the cow-pox eruption is modified and mitigated by it; but MM. Barthez and Rilliet have shown that, under certain circumstances, the variola is aggravated by the vaccination; while M. Bousquet has maintained that vaccination has no influence whatever, and that the modifications of the variola which follow it are mere coincidences. From a general review of the facts known, however, it cannot be doubted that the variola is modified favourably by vaccination in the great majority of cases, so that all its stages are shortened and lessened in severity; in fact, the variola is transformed into a varioloid. And this modification will take place even when the vaccination is done during the incubation of the eruptive fever, provided the vaccinal eruption precedes the eruption of small-pox. But in some exceptional instances, which are far from rare, variola supervening on vaccination has been found unusually dangerous and fatal. In these cases, according to M. Barthez, the small-pox is not fatal from its own intensity or from its usual complications, but it is modified unfavourably by the vaccination, and presents various anomalies. The eruption is generally small, unequal, irregularly scattered, pale, without areola, without local or general reaction; sometimes there is more activity in the beginning of the eruption, which is accompanied by fever, but the disease soon puts on the characters of the hæmorrhagic small-pox. These anomalies have been observed only in very young children, of weak constitution, or reduced by previous illness; and in them the concurrence of vaccination and variola has invariably proved fatal. On the other hand, very young, weak, and sickly children have sometimes recovered from the variola alone; so that it appears that the vaccination aggravates instead of lessening the danger under these circumstances, and induces an anomalous and fatal form of small-pox. Accordingly, the author lays down the following rules:—1. If we vaccinate children during the incubation of small-pox, so that the vaccinal precedes the variolous eruption, the latter will be almost always modified.—2. That in the great majority of cases the modification will be favourable, and the variola will be changed to a varioloid.—3. That if the eruptive fever, in being modified, assumes a grave character, this must be attributed especially to the previous state of health, along with the very young age of the child.—4. That, in the latter case, the vaccination being a third disease superadded to the two already existing, has no favourable influence on the small-pox, but only forms a complication, which is of the greatest danger, from the early age and feebleness of the child.—*Monthly Journ. of Medical Science* and *Revue Med. Chirurg. de Paris.*

*On the Cure of Gall-Stones.* By M. Barth.—M. Barth, in a paper entitled "Anatomico-pathological researches on the mechanism of the spontaneous cure of gall stones, and on the practical consequences which may be deduced," says:—The nucleus of gall stones consists in general of a mass of inspissated bile, and many calculi are composed entirely of this substance; hence the utility of strict attention to diet, both as a prophylactic and curative agent, of the abundant use of diluent drinks, and the frequent employment of laxatives to prevent the unnatural thickening of the bile.

The predominance of cholesterine, or fatty matter, in the composition of a great many calculi, indicates the advantage of a vegetable diet, and of the use of alkalies and alkaline baths, care being taken to refrain as much as possible from all fatty matters. The solubility of the greater number of calculi in ether and in oil of turpentine, encourages us to make use either of ether alone or of a mixture of ether and oil of turpentine, both internally and externally. There is no doubt an immense difference between the effect of ether on a calculus plunged into it, and its action when introduced by the stomach; still, however minute this action, it may be sufficient to diminish the size of the gall-stone a little, and so to allow it to pass through the biliary canals.

In addition to these means, it will be well to employ frictions of belladonna, with a view to facilitate the dilatation of the duodenal extremity of the common duct, which is the point which offers most resistance.

It appears that some calculi may be broken up within the gall bladder, and hence the utility of applying firm pressure and percussion to the right hypochondrium.

M. Barth adds, that whatever may be thought of the reasoning on which these practical deductions are founded, frequent success, both in hospital and private practice, has proved to him the utility of the combination of these modes of treatment. —*Bulletin l'Academie Imperiale de Médicine*, March 7, 1854.

[In a paper on the same subject, published in the *Journal de Médecine et de Chirurgie Pratiques*, for February last, Professor Trousseau recommends a mode of treatment almost identical with the above. He does not, however, believe that ether can have any effect in dissolving calculi already formed, but he considers that it acts as an anesthetic on the nervous system of the stomach and duodenum, and is hence very useful in cases of hepatic cholic. With this view, he recommends it to be prescribed either in capsules, or in a mixture of syrup and orange-flower water, of which a tablespoonful (containing about ten drops of ether) is to be taken every half hour; attacks of hepatic colic rarely fail to be relieved by this means. To cure the tendency to the formation of calculi, M. Trousseau recommends the use of alkalies and alkaline baths, a diet consisting of lean meat, fish, and vegetables, and this combined with plenty of exercise.]—*Edinburgh Monthly Journal.*

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## DUBLIN WORKHOUSE HOSPITALS.

### *Scrofulous Tumours of the Brain.*

BY DR. MAYNE,
PHYSICIAN TO THE SOUTH DUBLIN UNION WORKHOUSE, AND LECTURER ON PRACTICE OF PHYSIC AT THE CARMICHAEL SCHOOL;
AND DR. KIRKPATRICK,
PHYSICIAN TO THE NORTH DUBLIN UNION WORKHOUSE.

It appears to be pretty generally admitted by pathologists, that the diagnosis of scrofulous tumours of the brain is often attended with difficulty; growths of this description, whether developed in the substance or upon the surface of the cerebrum or of the cerebellum, having necessarily no *special* diagnostic signs.

Cruvelhier (a high authority on all such subjects) has stated, that the symptoms which accompany these growths are often vague and unsatisfactory; he has even met with cases in which these diseases were absolutely latent; nothing whatever having occurred, from first to last, to warrant a suspicion that the brain was implicated; and yet, when death ensued in consequence of disease in some remote organ, the *post mortem* examination unexpectedly disclosed scrofulous masses within the head.

Sometimes the symptoms are intermitting, and, as it were, capricious; thus they may clear up temporarily at a time when, to all appearance, the patient is reduced to the last extremity; and again, they may often prove suddenly and unexpectedly fatal.

During its growth, the tubercular deposit is apt, no doubt, to irritate, or to compress, or otherwise to injure the neighbouring nervous material; and in this way symptoms may arise denoting an inflamed, or a compressed, or a softened brain. Thus, in one case, there may be local pain or delirium, or both; in another, convulsions; in a third, coma or paralysis; in a fourth, various lesions of the mental faculties; in a fifth, several of the foregoing symptoms combined. In all this there shall be the strongest evidence of the secondary mischief produced by the tubercular deposit, *but nothing whatever pathognomonic of tubercle.*

In scrofulous diseases of the brain, just as in many other diseases, the diagnosis must mainly depend upon our tact in tracing local symptoms to their constitutional source. In iritis, for example, we accomplish little without discovering the syphilitic, or the rheumatic, or the scrofulous, or the gouty constitutional taint on which the iritis depends; and so, of these cerebral disorders, their *specific characters are stamped upon them by the scrofulous constitution* in which they arise.

The following cases illustrate in a very striking manner the truth of many of the foregoing statements, and in a medico-legal point of view, one of them presents some features of the greatest interest.

Case I.—James Humfreys, æt. 10 years, had been for a length of time in the school attached to the South Dublin Union Workhouse; for two years he had been delicate, and subject to seizures of a very remarkable description; they were characterized by a sudden attack of severe headach, coming on in the most unexpected manner, and always accompanied by symptoms of febrile excitement, such as hot skin, quick pulse, flushed face, and sick stomach. For these attacks he was frequently transferred to the hospital. On reference to the books it appears that he came in this way under treatment no less than ten times during the two years preceding his death, and (a very remarkable circumstance) his symptoms always yielded quickly to the simplest treatment; a single grain of calomel, followed by a mild dose of purgative medicine, together with rest and confinement to bed for a few hours, invariably effected a cure. His appetite quickly returned, his headach disappeared, his spirits regained their buoyancy, and he soon asked for his discharge, not liking the restraint and confinement of the hospital.

These attacks were not regularly periodic, for at times several months passed over without his making the slightest complaint; and again, two or three seizures would occur in as many weeks.

Although this boy's general appearance indicated a scrofulous taint, yet his muscular system was well-developed, and in the intervals between the attacks of headach he used to join heartily in the plays of the other boys, and to appear as active as any of them.

In his mental endowments there was no deficiency whatever; his schoolmaster declares him to have possessed average abilities; all his organs of special sense were perfect; he had never shown the slightest indication of any paralytic affection, nor had he ever been epileptic. In short, occasional attacks of headach, attended with fever and sick stomach, very fugitive and very uncertain in the periods of their occurrence, without epilepsy, and without any impairment of mental faculties, or of muscular power, were the leading symptoms of this case.

On Sunday, the 9th of April, he went to church apparently in perfect health; he ate his dinner afterwards with his usual appetite, and retired to bed in his usual health. About four o'clock in the morning the night man heard him breathing heavily and moaning in his sleep, and it soon appeared that he was in a state of nearly perfect stupor. Attempts were quickly made to arouse him, but he only pointed to his head, and muttered something about pain in it. On the arrival of the apothecary, who was immediately summoned, the boy was absolutely dead; he had died comatose.

The circumstances of this case were considered sufficiently suspicious, and an inquest was held accordingly.

At the *post mortem* examination the following appearances were discovered:—Some vascularity of the scalp; dura mater considerably congested; the upper surface of both hemispheres of the cerebrum greatly congested, and the serous membrane covering them excessively dry and clammy. On attempting to remove the brain from the cranial cavity, considerable difficulty was experienced in detaching it from the left occipital fossa, very firm adhesions existing between the left lateral hemisphere of the cerebellum and the membranes lining the corresponding bone.

The ventricles of the brain contained a very large quantity of transparent serum, which was the more remarkable as the free surface of the arachnoid was at the same time absolutely dry. On turning up the brain, a large, flattened, oval tumour was found on the surface of the left lateral hemisphere of the cerebellum, corresponding to the points of adhesion, already mentioned; this tumour was as large as a pullet's egg, it was of a greenish-yellow colour, cheesy in appearance, and of very firm consistence. The cerebellum was deeply indented by this mass, which must have exercised a considerable amount of pressure upon the nervous material beneath it, the injurious effects of which were apparent in the softened condition of the adjoining stratum of brain. In every other respect the encephalon appeared healthy.

In the chest there were old pleuritic adhesions at the left side, with a few scattered tubercles in the false membrane, but the lungs were free from any tubercular deposit.

The abdomen was healthy.

From this case several valuable inferences may be drawn:—

1st. It shows how very equivocal the symptoms of scrofulous tumour of the brain may be.

2nd. How intermittent these symptoms may be.

3rd. How sudden and unexpected the fatal result may be.

It would appear that the death in this case was apoplectic, a sort of sero-sanguineous apoplexy, excited, doubtless, by the presence of the morbid growth.

Case II.—James Cooney, æt. 15, admitted into the North Dublin Union Workhouse on April 3rd, 1853. His father and mother were both dead; one brother and one sister had died of spine disease, and his history was collected with difficulty from a little girl, his sister, the only other surviving member of his family.

He had been stupid from infancy, his intellect being so deficient that it was found absolutely impossible to teach him to read. For a length of time previous to his admission he had complained of his head, and of late there was a remarkable tremor observed in his left hand, in addition to which he had also become epileptic.

On admission he complained of violent pain in his head, his features were swollen, his aspect was stupid, the right retina was perfectly amaurotic, the corresponding pupil being widely dilated, and immoveable; there was also a considerable amount of fever upon him; the fits were found to recur frequently, and to commence invariably with a scream. His bowels were constipated, he had frequent vomitings, his appetite

fail him on the approach of a fit, at all
mes it was voracious. With the excep-
his right eye, as already specified, all the
of special sense were perfect.

the date of his admission the disease
to progress steadily. In the month of
er the fits had become much more fre-
recurring regularly every third day; the
tremities, both upper and lower, were
mpletely paralysed, having lost all volun-
wer of motion, and being nearly devoid
tactile sensibility, and yet, during the
seizures, they moved equally with the
nding upper and lower extremities of
t side. There was now also incontinence
and fæces; he was stone blind of both
he left pupil, although of its natural size,
mmoveable, and the right, as previously,
oth dilated and immoveable. He still
ned bitterly of pain in the head.

e month of March further changes were
. The left upper and the left lower extre-
had undergone a process of slow tonic
tion, so extreme in degree that the left
as forcibly bent over the shoulder, and
heel as forcibly pressed up against the
nding buttock. The pulse was now pre-
rally slow, and the fits had become fear-
equent.

is period he presented a singular combi-
f symptoms, for he lay almost constantly
hargic condition, and yet he evinced a
able amount of consciousness, by reply-
ectly to certain questions; of memory, by
g occasionally of his father and mother;
motional feeling, by shedding tears and
ng otherwise much affected at the men-
his brother's name.

in three days of his death, which oc-
on the 12th of April, his hearing was
tly good to enable him to recognize, by
ices, some of the persons about him in
d; he also ate and drank up to the very
r of his life.

*ost mortem* examination was made a few
fter death. A large scrofulous tumour
nd situated on the upper surface of the
rebral hemisphere, immediately adjoining
t longitudinal fissure. This tumour was
hes long, three inches and a half broad,
inches and a half in depth. To the
of this tumour superiorly the membranes
brain were firmly adherent, and at the
tuation the right parietal bone had un-
a process of absorption to such an ex-
at what remained of the osseous mate-
perfectly diaphanous, and would have
to the slightest force. A section of the
disclosed a dense, yellow, tubercular ma-
ossessing very considerable solidity every-
except towards the centre of its base,
a small portion of it was red and soft,

almost like brain in a state of ramollissement. Inferiorly this tumour was deeply imbedded in the brain; its effects upon the nervous material were visible in the extensive softening which prevailed far and near around it. Fully two-thirds of the right cerebral hemisphere were converted into a pultaceous mass, being reduced to a state of extreme creamy ramollissement. The posterior lobe of this hemisphere had alone escaped disorganization; but even here incipient traces of the same destructive process were observable in large patches of deep red vascularity, almost resembling the tint of the damask rose.

The left hemisphere of the cerebrum had its natural appearance, but most of the structures placed in the middle line of the brain, such as the septum lucidum, fornix, &c., were extensively softened.

In this case, the boy's age and history, added to the strong predisposition in his family to scrofulous disease, rendered it probable that the primary cerebral mischief was of a strumous character; the first marked cerebral symptoms were indicative of cerebral irritation, the next were obscurely inflammatory, the last were characteristic of a softened and possibly of a compressed brain. The diagnosis of "scrofulous tumour of the brain with ramollisement" was therefore made, but not without considerable hesitation.

To the physiologist this case affords many facts of great interest. The right retina was the *first* to become amaurotic, although the tumour was situated at the *right* side of the brain, and the left hemisphere of the cerebrum would appear to have discharged (very imperfectly, no doubt) many of the cerebral functions, at a time when the right hemisphere of the brain must have been nearly disorganised.

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## MERCER'S HOSPITAL.

### *Case of Intestinal Obstruction simulating Strangulated Hernia.*

BY WILLIAM JAMESON, M.D.,

SURGEON TO THE HOSPITAL, EXAMINER IN MIDWIFERY TO R.C.S.I., ETC.

Eliza Dornin, æt. 35, a thin, spare woman, the mother of six children, the youngest still-born a year ago, was admitted into Mercer's Hospital, under my care, on Monday evening, the 24th April, at half-past nine o'clock, under the following circumstances:—She had a femoral hernia at the right groin for two years previous; sometimes partially, but never completely going back into the abdomen. At five, P. M., on the previous Saturday, she had been seized with sickness of stomach and vomiting, accompanied by occasional hiccup and constipated bowels, which continued up to the time of her admission. The abdomen was very tympanitic and prominent; no tenderness on pressure. There was a tumour occupying the right femoral region, about two inches long, in the transverse, and one in the perpendicular direction. This was hard and tense, but did not present that indescribable feel to the educated finger of a strangulated hernia. It was not painful under steady pressure; the integuments covering it were red and slightly inflamed, a condition attributed to the application of turpentine before admission. Her tongue was dry and furred; pulse, 100. She complained of *deep pain at the right side of her back.*

We had her placed in a hip bath, a large turpentine enema thrown up with a long tube, and while under the influence of chloroform, endeavoured to return the intestine. The tumour became softer under the taxis, but its volume was not reduced. In consultation it was agreed, that as there were no symptoms then present of strangulation, except the constipation, we should try the effects of cold to the part, and give a grain of opium every second hour, and an enema every third hour during the night.

Tuesday, nine o'clock, A. M.—Slept pretty well; her stomach rejected all fluids taken during the night. She expelled both up and down a considerable quantity of flatus, which greatly reduced the size of her abdomen, but the enemata brought away no fæcal matter. The taxis again failed, assisted by the exhausting glass placed on the lower part of the abdomen; these caused no pain, but made no impression whatever on the tumour. Tongue and pulse as before. To have the abdomen stuped, and ℥i. of rose mixture taken every second hour, followed by a large emollient enema.

Five, P. M.—No motion from the bowels; belly very tympanitic. The parietes of the abdomen are so thin, that the outline of the intestines can be traced through them.

She continues to bear pressure over the abdomen and tumour, without its causing pain, and had no return of the vomiting since morning. Ordered:—

℞ Olei croton tig. gutt. ij.
Pil. rhei comp. gr. v.
Stat. sumend.

Nine, P. M.—Has had no motion from the bowels, but has had some gulping of a brownish-yellow matter possessing no fæcal smell. *Complains of her back.* The tumour, and the integuments covering it, continue in the same state. In consultation it was agreed to repeat the pill, and to have freezing mixture applied to the tumour occasionally during the night.

Wednesday morning, nine o'clock.—Passed a sleepless, restless night; rejected all fluids off her stomach. Belly even more prominent and tympanitic, but bears deep and heavy pressure without evincing pain; complains of thirst *and the pain in her back:* tumour in the same condition.—Ordered an enema.

Five, P. M.—Considerable prostration; pulse very feeble; countenance sunken; voice weak; local symptoms the same. We now ordered her some punch, and to have a grain of opium every second hour, followed by a draught composed of—

℞ Aq. cinnam. ℥ss.
Ol. terebinth. gtt. xv.

And fomentations to the abdomen.

Eight, P. M.—The pulse had more volume; the countenance was brighter; the voice stronger; but all the other symptoms remained unaltered. Under these circumstances (in full consultation with my colleagues) it was considered advisable to delay no longer, but at once proceed to perform an exploratory operation to see the condition of the intestine.

Accordingly, the part being shaved, we had her placed on the table (we did not consider it prudent to put her under the influence of chloroform), and performed the usual operation, making the incision parallel to the long axis of the tumour. The integuments covering it were red, and remarkably thin. The sac was soon opened on a director; it contained no fluid. The intestine *was pale, flaccid, and perfectly healthy* in appearance, with the exception of being rather flocculent from old depositions of lymph causing it to adhere in many points to the inner surface and neck of the sac. The ring being tight, I inserted Cooper's knife, and gave a nick to the base of Gimbernaut's ligament, but made no attempt to return the intestine, as it was quite evident that the cause of the obstruction did not proceed from this protrusion: the edges of the wound were consequently drawn together, and retained in apposition by two sutures, and the patient removed to bed.

There was not a teaspoon-full of blood lost, and the operation did not occupy five minutes in its performance.

She was ordered to have a pint of strong beef tea thrown up the rectum. The opium, the turpentine draughts, and the punch to be continued during the night.

Thursday, 7, A.M.—Greatly collapsed; eyes sunken; face pale; pulse quick, and very compressible. Stimulants were directed, but she became moribund, and died at 10, A.M.

*Autopsy,* six hours after death.—Body thin, but not emaciated; abdomen very prominent, conical, and tympanitic; the outline of the distended intestines quite visible through its parietes.

On laying the cavity open, the walls were the thinnest I had ever seen, not being thicker than a penny piece. There was not the *slightest inflammation present.* The intestines were very much congested, and enormously distended with air, being fully *seven inches* in circumference. The colon was not probably larger than under ordinary circumstances. There was a small amount of serum in the cavity, *but not a particle of lymph anywhere*. The portion of intestine involved in the hernia which protruded through the femoral ring, proved to be a knuckle of the ilium, about four feet from its termination in the colon. The upper portion, as far as its entrance into the ring, was enormously distended with gas, whilst that coming out of the ring was reduced to the size of the little finger, which size it retained throughout the remainder of its course. The knuckle outside the cavity was pale, healthy, very adherent by old adhesions to the sac, and around the ring; there was not any constriction, inflammation, or ulceration of the intestines at the ring. On gently pushing the intestines over to the left side, the mesocolon at the right side, a little above the caput coli, presented a very dark spot, which on being placed a little on the stretch, gave way by a very small aperture, and a thin yellow fluid poured out in a delicate stream. On carefully tracing the source from whence this came, and having slit up the duodenum, we discovered that it proceeded from an old ulcerated opening, with a defined round edge situated at its inferior angle. This opening communicated with a kind of cavity, or abscess, connected with a large mass of diseased glands, situated in the transverse mesocolon, filled with the contents of the duodenum, covered by peritoneum, which in all probability would have soon given way, and discharged its contents into the cavity of the abdomen, had she lived many hours longer.

This mass pressed more or less on the ascending portion of the colon, a little beyond the entrance of the ilium into the caput coli.

There was no fæcal matter contained in any part of the colon from this situation to the rectum, but the caput coli was full. Thus this mass of diseased glands, by its pressure, either arrested the peristaltic action of the intestines, or acted mechanically in obstructing the passage of the contents of the caput coli: for the intestine in its locality was slightly reduced in calibre, but not by any means rendered impervious to its contents in the dead subject, whatever influence it may have exercised on the living body.

The above important case has been fraught with a deal of interest: in the first place, the immense difficulty that existed in deciding on the propriety of operating shortly after her admission into hospital, where the taxis had failed, or whether this was a case of strangulated hernia, or not. For be it remembered, that she was reported to have had all the symptoms of this condition of intestine, prior to her admission, by Mr. Coppin, a medical gentleman perfectly competent to form an opinion on the case, at whose instigation I admitted her; but as these had all subsided, and she possessed *none* of them except the constipation, when seen by me and my colleagues, we agreed on the line of treatment adopted.

Again, the tumour decidedly became less on the first application of pressure, and as it never after became hard, rigid, or painful, we were in hopes it might return, or at least a passage through the bowels be obtained, if the peristaltic action of the intestines could be brought about by purgatives.

Again, the sickness of stomach was only occasioned when she overloaded it with drinks, or after the sickening effects of the croton oil.

At last, finding all our efforts unavailing, and the patient sinking, the exploratory operation was had recourse to, as no other course was left open to us, and the correctness of the original diagnosis of my colleagues verified, as there was no strangulation detected on laying bare the ring.

We have, therefore, to inquire what was the cause of the constipation, and what the cause of death. As regards the former, it is quite clear she laboured under an irreducible hernia; that the aperture through which the intestine passed was necessarily very small, and that in all probability there was an accumulation of flatus, to such an extent, as to induce complete atony, or paralysis of the muscular coat of the intestines, so as to prevent the circuit through the protruded portion. That this condition may exist, without being followed by peritonitis, and of itself be sufficient to kill, I have repeatedly seen after operations for strangulated hernia, when the stricture has been relieved, and the bowels returned, but no evacuation having followed, the patient has died within twenty-four or forty-eight hours, and not the slightest trace of inflammation been found on *post mortem* examination—no abnormal condition—nothing, in fact, to account for death, but intestines enormously distended with gas; and this cause of death I cannot call to my recollection having ever seen mentioned by authors.

But then it may be asked, had not the ulcer in the duodenum more to say to the production of the symptoms, and probably to her death, than the mere distended condition of the small intestines. On inquiry since the patient's death, we were informed, she never was what could be called a healthy woman; still, her only complaint was referred to the pain at the right side of her back, probably to the seat of this ulcer, and I am quite satisfied that the sudden prostration that took place a few hours before operation, in all likelihood, was caused by the giving way of the outer wall of the duodenum in the situation of the ulcer, thereby extravasating its contents among the diseased mass of glands. For we know that rupture of this bowel, followed by consequent extravasation of its contents *behind* the cavity of the peritoneum, will cause death long before inflammation can be set up, just as rapidly as if they were discharged *into* its cavity. This I have witnessed.

That the ulcer was not of recent formation is clear from the condition of its edges; still, it is strange that the only symptom ever complained of, before this last attack, was the local pain in the right side of the back, a symptom, I am informed by my colleague, Dr. Osborne, that frequently accompanies the other unequivocal signs of this condition of the duodenum.

Therefore, the conclusion I am disposed to arrive at relative to this interesting case is, that the constipation and death were occasioned by the atonic condition of her intestines induced by over-distention, and that if this condition had not existed, still her life could not have been long spared, on account of the disease of her duodenum.

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## On a New and Simple Method of Determining the Amount of Urea in the Urinary Secretion.

BY EDMUND WM. DAVY, A.B., M.B., T.C.D.,

LECTURER ON CHEMISTRY IN THE CARMICHAEL SCHOOL OF MEDICINE, DUBLIN.

Urea has long been regarded with much interest by scientific men, on account of its physiological and chemical relations.

It represents one of the last stages of a series of metamorphoses or changes, which nitrogenous matter undergoes in the animal economy, and is the form under which the detritus of preexisting nitrogenous tissues, which have become effete, principally passes from the system.

This interesting organic base, urea, is not only formed during the exercise of the vital functions in man, and some of the higher animals, but is also produced during the chemical decomposition of a number of substances containing nitrogen; and the chemist can now obtain it in any quantity by artificial means, and thus imitate one of the most important results of the chemistry of life.

In reference to medicine, urea is not without some practical interest, as it is well known that during various diseased conditions of the system the quantity of urea eliminated from the blood by the action of the kidneys, and excreted in the urine, is occasionally subject to great variation; and some ready means of ascertaining its quantity in that secretion might frequently aid the physician in forming his diagnosis of certain diseases.

Different means of effecting this object have, from time to time, been proposed; but all the methods hitherto recommended, with perhaps the exception of Baron Liebig's recent one, require for their execution much time and trouble, and in some cases complicated and expensive apparatus, and though capable, in experienced hands, of yielding tolerably accurate results, would, in the case of those not much practised in chemical manipulation, and perhaps unaware of the many sources of error to be guarded against, give anything but correct results; and, therefore, inapplicable to the greater number of those desirous of a quick and easy method of determining the amount of urea in urine.

The method I propose is one of extreme simplicity, and can be performed by almost any one in a very few minutes, and is capable of yielding results sufficiently accurate for all practical purposes.

It is founded on the fact I have recently observed, that urea is very readily decomposed by the chlorides or rather hypochlorites of soda, potash, or lime, and that its constituent nitrogen is evolved in the gaseous state, and from the quantity of gas evolved I estimate the amount of urea present.

After trying different means of carrying out this fact, with a view of making it available to determine the quantity of urea in urine, I found that the following very simple one seemed to answer the purpose completely.

I take a glass tube, about twelve or fourteen inches long, closed at one end, and its open extremity ground smooth, and having the bore not larger than the thumb can conveniently cover. This I fill more than a third full of mercury, and afterwards pour in carefully a measured quantity of urine to be examined, which may be from a quarter of a drachm to a drachm, or upwards, according to the capacity of the tube; then, holding the tube in one hand, near its open extremity, and having the thumb in readiness to cover the aperture, I quickly fill it completely full with a solution of the hypochlorite of soda (taking care not to overflow the tube), and then instantly cover the opening with the thumb tightly, and having rapidly inverted the tube once or twice to mix the urine with the hypochlorite, I finally open the tube under a saturated solution of common salt in water, contained in a steady cup or small mortar. The mercury then flows out, and the solution of salt takes its place, and the mixture of urine and hypochlorite being lighter than the solution of salt, will remain in the upper part of the tube, and will therefore be prevented from descending and mixing with the fluid in the cup. A rapid disengagement of minute globules of gas soon takes place in the mixture in the upper part of the tube, and the gas is there retained and collected.

The tube is then left in the upright position, till there is no further appearance of minute globules of gas being formed; the time being dependent on the strength of the hypochlorite and the quantity of urea present; but the decomposition is generally completed in from three to four hours. It may, however, be left much longer, even for a day, if convenient, and having set the experiment going, it requires no further attention; and when the decomposition is completed, it is only necessary to measure the quantity of gas produced, by transferring it into a graduated tube or measure.

I have generally used a graduated tube in the first instance, as it saves the trouble of transferring the gas, and incurring the risk of losing some of it in the process.

That which I would recommend as being convenient for this purpose, is a stout tube having a bore of half an inch in diameter, and capable of holding from two to three cubic inches. A tube having this bore, and about fourteen inches in length, will hold two-and-a-half cubic inches, which will be quite large enough. Each cubic inch of it should be divided into tenths and hundredths of a part of a cubic inch. It is scarcely necessary to remark, that in cases where great accuracy is required, due attention must be paid to the temperature and atmospheric pressure, and certain corrections made if these should deviate from the usual standards at the time of reading off the volume of the gas; but in most cases, sufficiently near approximations to accuracy may be obtained without reference to these particulars.

From a number of experiments I have ascertained that the quantity of gas evolved from different amounts of urea (treated in the way I have described) very closely approximates to the quantity of nitrogen gas which should be furnished from the urea by calculation.

This will be seen from the following experiments taken from many:—

The fifth part of a grain of urea should furnish by calculation, 0.3098 parts of a cubic inch of nitrogen gas, at 60° Fahr. and 30′ Bar.; the same quantity of urea, treated, as described, furnished in one experiment, 0.3001, and in another 0.3069 parts of a cubic inch of gas, at the same temperature and pressure, which shows that the calculated quantity of nitrogen differs from the amount of nitrogen gas obtained by only a few thousandths of a part of a cubic inch. I may observe, that I was obliged to operate on such small quantities of urea, on account of the graduated tube I had at the time being only of one cubic inch capacity. Seeing, then, that the quantity of gas evolved agrees so very closely with the calculated amount of nitrogen present in a certain quantity of urea, I take the calculated amount as being the more correct, and knowing the relation that exists between a certain quantity of urea and nitrogen, I can, from the quantity of gas evolved in any case, easily calculate the amount of urea present, by the simple process of rule of three.

Thus, the fifth part of a grain, or 0.2, of a grain of urea gives, by calculation, 0.3098 parts of a cubic inch of gas. Then, 0.3098 : the volume of gas found : : 0.2 : to the required quantity of urea, or multiplying the first and third terms by five, we have 1.549 cubic inch of gas representing 1. grain of urea, which is a simpler proportion. Using this data, I made several comparative experiments on different samples of urine, with my method and that of Baron Liebig's, which I believe is considered one of the most accurate of the methods of determining urea in urine at present known.

The following are the results of three comparative experiments on different samples of urine, using the same with each method:—

| | Amount of urea in grains and parts of a grain in one fluid ounce of urine. | |
|---|---|---|
| | *Liebig's.* | *New Method.* |
| First, . . . | 3 680 | 3.712 |
| Second, . . . | 5.328 | 5.472 |
| Third, . . . | 4.976 | 4.976 |

In the first and second experiments the quantity of common salt present in the urine was taken into account, as it is found to increase to a slight extent the apparent quantity of urea in the urine by Liebig's method; in the third this was not taken into consideration, and the quantity of urea was compared with the mean of two results obtained by my method.

These experiments show how very closely the results obtained by the new method agree with those by Baron Liebig's, and therefore show the correctness of the former method. I prefer the hypochlorite of soda to that of potash as a decomposing agent, because the soda salt is an article of our pharmacopœia, under the name "Sodæ Chlorinatæ Liquor," and therefore can be so easily procured, whereas the potash salt, not being used in medicine, would require to be specially made for this purpose. As to the hypochlorite of lime I do not think it so effectual, and it has the disadvantage of soiling the sides of the graduated tube by the carbonate of lime formed in the reaction. In reference to the quantity of hypochlorite of soda to be used, it should always be employed in excess, and I think that about five or six times the volume of urine employed would be found generally to be quite sufficient, and ensure there being an excess.

The amount to be used may be easily determined by direct experiment, by adding to a certain quantity of urine to be examined, in a small glass, a measured quantity of the hypchlorite, and leaving it for a short time till the evolution of gas is nearly over; then if, on the addition of more of the hypochlorite, the effervescence is renewed, it shows that there was not enough of the decomposing liquor first employed, and more must be added till there is no further evolution of gas produced, and the quantity of hypochlorite which is required to arrive at this point indicates the amount necessary. I found by experiment that one grain of urea requires somewhere about half a fluid ounce of the ordinary Sodæ chlorinatæ liquor for its complete decomposition.

The amount of mercury employed requires some little attention; it should, as a general rule, be never less than the volume of gas evolved, for if the volume of gas produced is more than that of the mercury employed, it will be more than that of the solution of salt, and therefore some of the mixture of urine and the hypochlorite will be forced out of the tube before it is completely decomposed, and consequently some of the gas will be lost; so that if this occurs we must repeat the experiment, using either a larger quantity of mercury, if our tube will allow, or diminishing the quantity of urine employed. It might be supposed, on first sight, that this method would be liable to the following source of error, viz.:—that some of the gas would be evolved and lost during the pouring in of the hypochlorite; but this is not the case, as several seconds elapse before there is any apparent reaction or evolution of gas on mixing the hypochlorite with the urine, and therefore giving full time to perform the experiment without loss of any gas.

I have, also, ascertained that the ordinary acid reaction of the urine does not affect my method.

I should observe, that this new method, like all the others known, is not perfectly free from some slight sources of error; the principal one being, that ammonia, if it exists in the urine, gives rise to nitrogen, and, therefore, increases the apparent amount of urea. But the same objection holds equally in Liebig's and Ragsky's method, which are, perhaps, the two most accurate at present known. Uric acid, also, is similarly affected by the hypochlorite, but it and ammonia ordinarily occur in such small proportion in urine, that the error produced would be but trifling, and is partly corrected by taking the calculated quantity of nitrogen, which is, as I have shown, something more than that derived from a certain quantity of urea by direct experiment.

In cases where ammonia or uric acid occurs in more than ordinary quantity, these substances must be separated by the usual means employed, before having recourse to my method.

I should think that gently heating the urine with a certain quantity of baryta water, as long as the odour of ammonia is disengaged, and then filtering the solution, as recommended by Liebig, for the separation of ammonia before applying his method (see the "Journal of the Chemical Society," vol. vi. page 30) would effect the object very easily, and separate not only the ammonia, but, also, the greater part, if not all of the uric acid present.

There is one other source of error which may arise, and which can easily be avoided; it is the following: that if a solution of hypochlorite of soda, alone, or standing over mercury, be exposed to the light for several days, it will very gradually evolve a very minute quantity of oxygen. So that the experiment in determining urea should not be carried on for too long a time, but a day, or even two, will scarcely make any appreciable effect on the quantity of gas evolved in testing for urea.

The reaction which appears to take place in the process seems to be the following: the hypochlorite of soda reacting on the urea gives rise to nitrogen, water, carbonic acid and chloride of sodium:—

$$\begin{array}{lll} & \text{Urea.} & \text{3 Hypochlorite Soda.} \\ \text{Thus,} & C_2\,H_4\,N_2\,O_2 + & 3\ (ClO \cdot NaO) \\ & = N_2 + 2\ CO_2 + 4\ HO + 3\ Cl\,.\,Na & \end{array}$$

The nitrogen is evolved and the carbonic acid is absorbed by some of the hypochlorite of soda in excess, for I find that this salt absorbs carbonic acid very quickly, without evolving any other gas, and I have failed in several experiments to detect the smallest portion of carbonic acid gas in the gas produced by acting on urea, though I have always noticed the presence of a very minute quantity of oxygen in the nitrogen.

These appear from my experiments to be the changes produced; but this part of the subject I have not as yet minutely examined, and my experiments have hitherto been made on healthy urine; but I have ascertained that several of the substances found in urine during disease, as, for example, sugar, albumen, bile, and excess of urinary colouring matter, produce scarcely any effect on the results obtained by this new method of determining the quantity of urea in the urinary secretion.

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## On the Surgical Treatment of Fissure of the Anus.

BY T. B. CURLING, M.D.

TO THE EDITOR OF THE DUBLIN HOSPITAL GAZETTE.

Sir,—In a lecture on ulcer of the rectum, by my friend Mr. Hamilton, published in the last Number of your Journal, it is stated, "Mr. Curling, I find, still advises the division of the sphincter." This statement is founded, I presume, on the recommendation made by me in my work on "Diseases of the Rectum," which appeared in the early part of 1851. As I do not wish to be considered to sanction an operation of greater severity than what I now believe to be necessary, I beg to offer the following explanation.

Shortly after the publication of the work alluded to, I met in consultation on the case of

rho, amongst other complaints, had an
i of the rectum, an eminent physician,
conversation, mentioned that Mr. Cope-
s accustomed to cure rectal ulcers by a
and slighter operation than the one ge-
practised. Being acquainted with Mr.
d, and knowing his great experience in
itment of diseases of the rectum, I took
opportunity of seeing him on the sub-
iis operation. He stated that he treated
of the rectum by an incision so slight
was almost bloodless; and he referred
ongst other cases, to that of a medical
ian at the west end of the town, who,
g severely from the complaint, had con-
a surgeon of great eminence, and had
ld that nothing would cure the sore but
on of the sphincter muscle. He after-
saw Mr. Copeland, who made a slight
ial incision, which relieved him at once,
ected a cure almost without interfering
is engagements in practice. Since this
w, I have been in the habit, when treat-
ere cases of irritable ulcer, of making
simple superficial incision of the part;
ing, in fact, a slighter operation than
I previously practised and recommended.
sults have been in all instances quite
tory.

Copeland, in describing his operation,
f it as merely a division of the mucous
ne. I am convinced that on this point
error; at any rate, that this is not suffi-
and that, however slight and superficial
ision may be, a few at least of the
f the sphincter must be divided. I had
to examine the rectum of a lady suffer-
m this affection; whilst she was under
uence of chloroform, and the parts being
, and in a good light, I was able to bring
er well into view, and could distinctly
the fibres of the sphincter forming the
of the sore. Now it is clear that in such
or in an ulcer which has destroyed the
surface, an incision through the base of
must reach and divide muscular fibres.

I am, sir, your obedient servant,

T. B. CURLING.

Broad-street, London,
ay 8th, 1854.

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## MENTS ON THE INJECTION OF PERCHLORIDE OF IRON INTO ARTERIES.

iraldès, whose character stands so high
entific surgeon, and whose memoir on
the maxillary system has just been
by the Academy of Sciences with a
1500 francs, has, in company with M.
, Professor of Anatomy of Alfort, been
ing a number of experiments to as-
the coagulating power of solutions of
perchloride of iron on the blood in the vessels. The original memoir is before the Academy of Sciences, but M. Giraldès has published a resumé in the *Gazette Hebdomadaire de Medicine*, of the 21st of last April. The results of these experiments are likely to prove so important in their results on the practice of surgery and medicine, in aneurisms, anastomotic tumours, varices, hemorrhagies, &c., that we think an abstract of the paper will prove valuable to our readers. M. Giraldès says:—

"The experiments of which we are about to make a short resumé were begun in the month of April, 1853; they were finished the month of March of this year: they were thirty-five in number.

"We had in view to study:—

"1. The action of the perchloride of iron on the blood in the circulation, and on the coats of the vessels.

"2. To study the different phenomena which develope themselves after this operation.

"3. To follow the phenomena in each of the phases of their evolution.

"Finally, to deduce from these experiments some general principles applicable to practice.

"Pravaz first made known the coagulating powers of the perchloride of iron in the blood. But his facts were too undefined to serve as guides in its use. The solution he first used was concentrated to the greatest degree; afterwards, however, he employed a weaker solution, but the indication of the proper strength was so vague, that the final use of this agent might have been seriously compromised. After having tried his method, we were obliged to continue our experiments with a much weaker solution.

"The perchloride that we at first employed marked 49 degrees of the barometer of Baumé; it was supplied to us by MM. Rousseau.

"In the second series of experiments, began the 30th April, 1853, we used a solution made by M. Lassaigne, at 29½ degrees (1.258 Bingley).

"After having pursued our researches with perchloride of iron at this strength, we finished them by a series with a solution at 15 degrees (1.114 Nicholson).

"Let us now give the principal results of the experiments: some drops of perchloride of iron injected into the carotid artery of a horse coagulated the blood for a distance of four centimeters. Two drops of 49 degrees, three at 30 (1.267 of Bingley), six at 15 degrees, produced a coagulation. After the injection, there formed in the vessel, at the end of three or four minutes, a clot more or less firm, which remained in its place, and stopped the circulation.

"We call that primitive clot which is produced by the direct action of the injection; we call those secondary clots which form some time afterwards. These last are formed at the same time on the side of the heart, and on the peripheric side. This double secondary clot thus limits, on every side, the first, and seems in some way destined to prepare the means to obtain a complete separation of it.

"These first phenomena are soon followed by others, which are developed in the coats of the arteries. These membranes, in fact, become the seat of a highly developed organic movement, which produces an hypertrophy of the middle coat, and an infiltration of plastic lymph in the external tunic.

"To sum up, then, we would say, that an injection of perchloride of iron in an artery determines:—1. The formation of primitive and secondary clots. 2. Modification of nutrition in the arterial tunics."

As we would suppose, the effects vary according to the strength of the solution.

"In the first experiment, that where the solution was forty-nine degrees, we observed the following particulars:—the primitive clot was of a firm and compact consistence, it filled the artery as if it had been moulded in its cavity; it was formed by a 'magma,' black, firm, granulated when broken up in the fingers, and rapidly becoming indurated; this 'magma' was quite unfit for any organic action. The walls of the artery offered dangers which deserve attention; the internal and middle coats, and a portion of the external, were thinned, contracted as if tanned; they had a tinge of brownish yellow, were torn and broken with facility. Thus, the blood and the arterial coats were profoundly altered by the action of the chemical agent, and this alteration constituted a true mortification; these organs were therefore unfitted for any work of reparation."

Wth the solution of thirty degrees, the effects were less strongly marked; both the clot and the arterial coats having still vitality enough left to be susceptible of organic processes.

The solution of the third degree of strength changed the clot as well as the arterial coats much less. The epithelium, as well as the internal membrane, were destroyed, but the middle coat was hardly touched; moreover, the vessel was dilated the whole extent of the clot.

"These three experiments will enable us to signalise the principal points which govern all this question, viz.:—

1. The formation of compact clots, accompanying a profound alteration of the arterial coats, mortification, disorganization of the blood and of the arteries.

"2. Formation of mixed clots, accompanied by an alteration of the coats less profound, with dilatation of the artery."

It is most important to guard against using too strong a solution, or injecting too large a quantity, a few drops of a moderate solution being sufficient to produce the desired coagulation of the blood, whereas, when the solution has been very strong, or the quantity injected great, the clot is so hard, and the vessels become so completely disorganised, that vital action ceases, mortification ensues, and when the dead parts separate, fatal hemorrhage takes place.

Finally, he says, after the injection of the perchloride of iron into the arteries, we observe primitive and secondary phenomena. In the first we place the formation of primitive and secondary clots; secondly, the formation of a plug of plastic lymph.

In the second—1st. The encystment of the clots. 2nd. The cicatrization of the wound and the disappearance of the plastic plug. 3rd. The obliteration of the vessels.

Conclusions. After the experiments, of whose results we have given an abstract, we believe ourselves justified in establishing the following facts:—

1. The perchloride of iron, at 49 degrees, or at 45 degrees (1.435 Bingley), ought not to be employed, either in aneurisms or in erectile tumours: its use may be followed by serious accidents.

2. In aneurisms and in venous and arterial erectile tumours, we ought only to employ the perchloride at 30 degrees (1·267 of Bingley), or what is better, at 20 degrees of the areometer of Beaumé (1.167), in the proportion of five drops at 30 degrees, ten drops at 20 degrees, for a quantity of blood at three cubic centimeters.

3. The perchloride at 45 degrees (4.135) to 49 degrees, may be employed as a hæmostatic to arrest either deep hemorrhages, or hemorrhages diffused over the surface, or in secondary hemorrhages after amputation.

4. The perchloride at fifteen (1.114 N.), twenty (1.167 B.), and thirty degrees (1.267), may be advantageously employed in bloody cysts, particularly in those of the neck.

5. In some cases the perchloride at thirty to forty-nine degrees may be employed to modify the suppurative action in wounds.

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## PATHOLOGICAL SOCIETY MEETINGS.

### *March* 18*th.*

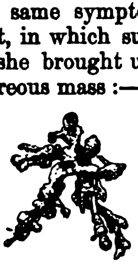
DR. FLEMING IN THE CHAIR.

### *Calcareous Bodies expectorated from the Lungs.*

MR. HAMILTON said, that some years ago he was sent for in the middle of the night to see a young lady, ætat. 22, delicate and highly nervous and hysterical, for spitting of blood. He found altogether about half a pint of blood in the basin; some black and clotted, the rest florid and fluid, mixed with clear, transparent, frothy mucus. The cough was very severe, with great effort, hard and sonorous, and chiefly dry; it to come from the upper part of the he bifurcation of the trachea rather than lown. The dyspnœa was great, with eaving of the chest and rapid breathing; reness of the right side of the chest, de- to be inwardly; flushing of the face, hot rofuse perspiration. Pulse 124, weak; loaded. The cough subsided somewhat, tinued for two days with hæmoptoe and a, when she spit up a small calculus the a caraway comfit. After this the relief ry striking; but still the symptoms con- but very mildly, when, after some dis- he spat up a second calculus, larger than mer, longer, and evidently moulded on the third class bronchial tubes.

symptoms now entirely disappeared; she still had cough, it was soft, and had same loud, sonorous tone; the hæmop- sed, and the soreness of the right side of st much diminished. The throwing up econd was three days from the first; after ound her remarkably well and cheerful; 6; skin natural.

ng the effort of expelling these bodies, alts of the examination of the chest were markable. There was no dulness on side, but the most marked difference in piration, which was puerile on the left, the whole of the right lung it was feeble to complete absence; not the feebleness ration observed when portions of the lung dified, as in tubercular deposition, for in- here, though the expansion of the chest rmous, all that was heard was a murmur iration, faintly drawn in, as if it had to ts way through some obstruction. This s obvious after the expulsion of the first s concretion, and still less so after the when respiration was pretty equal. The on of these bodies had been preceded by dyspnœa, at one time loss of voice, sore- the chest, and occasional bloody tinge of ectoration. After this she coughed up, rent times, small portions of calcareous with the same symptoms. After one olent effort, in which suffocation seemed nminent, she brought up this very large rious calcareous mass :—



irst view it looks like coral, or like a f grapes when they first appear; branches g and subdividing, till the smallest di- , or stems, end in minute globules. It is, bt, a perfect cast of the minuter bronchial nd the air cells—quite hard, but rather friable; and the only wonder is, that so large a body could have passed the rima glottidis without inducing suffocation, or that it should have gone through without breaking; it is, therefore, an extremely curious specimen in both these respects.

A very interesting question remains still to be considered—how far these calcareous bodies are connected with tubercular deposition in the lungs. In the above case, the young lady, after a time, exhibited symptoms of consumption; the right subclavicular region became dull, with feeble respiration, and then muco-crepitating rale. There was teasing cough, with the expectoration tinged with blood, and occasionally small calcareous particles would be observed in it; emaciation and night sweats. But the progress of the disease was slow, a year and a half having elapsed before she finally sunk under it.

I have, however, met with the case of a gentlemam, who, about twelve years since, coughed up one of these calcareous bodies with the greatest exertion and distress, so that he thought he must have been suffocated. He has been under my observation ever since, and has been in perfect health, free from cough or chest symptom.

A girl of seventeen, who had, for two months before I saw her, expectorated several calcareous bodies, and for five months previously had been spitting blood, with a cough loud and sonorous, like pertussis, and who had altogether been affected with pulmonary symptoms for two years, exhibited no signs of phthisis, percussion being equally clear in both subclavicular regions, but over the whole of the left lung respiration was feeble; loud and puerile in the right, with the expiration so short as to be scarcely observable. She was healthy-looking and stout; her chief distress was from dyspnœa, particularly when she walked; her breathing would then become so bad that she was ready to faint. There was a raw, sore feel in the centre of the chest between the mammæ. I have, very rarely, indeed, met with calcareous matter of the same character and composition, but of irregular shape, in scrofulous abscesses in the cervical lymphatic glands.

### *Scirrhus of the Pancreas, and Ulceration of the Gall-Bladder.*

**Dr. Lees** exhibited a remarkable specimen of ulceration of the gall-bladder, which had caused death by peritonitis from extravasation of bile into the peritoneum; the patient was deeply jaundiced, and the gall-bladder was distended, owing to obstruction by the pressure of a scirrhous pancreas on the common duct. This case will be published at length in a future Number of this Journal.

### *Internal Strangulation.*

**Dr. Gordon** detailed the particulars of the above case, which is as follows :—A woman was admitted into the Whitworth Hospital upon the 15th of March, suffering from the usual symptoms of peritonitis. On that day week she had been attacked with vomiting, and her bowels had not been moved since; after a time she suffered from severe pain in the abdomen, which resembled colic, and for the first four days was relieved by pressure. The symptoms, however, soon assumed the character of peritonitis; the abdomen became swollen, and was tender on pressure; and on examination, when she entered hospital, an oblong tumour could be detected, proceeding upwards from the right iliac fossa. The case was evidently one of peritoneal inflammation, which I conceived to have been caused by internal strangulation, from the primary symptoms being constipation and vomiting, and from the feel of the tumour, which was evidently distended intestine. She was cold and pulseless on admission, but survived until the following day. On examination we found everywhere intense vascularity of the peritoneum, and lymph uniting some of the folds of the intestine; there was also a small quantity of blood extravasated into the abdominal cavity. The portion of intestine which formed part of the tumour was very dark-coloured and gangrenous; the obstuction was found to be produced by a fold of the ilium, which became twisted on itself, so as to prevent the passage, even of air, through the part. There was no unusual opening in the mesentery, nor any bond of lymph, or diverticulum, but the mesentery was somewhat longer than usual, and the intestine was twisted on itself around the mesentery, and being distended with air, could not right itself; thus causing the fatal result.

The tumour, which existed in the right side, was merely an enormously distended portion of intestine.

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## SUMMARY.

*Chronic Urticaria treated by Quinine.*—Mr. Startin is stated (in the *Medical Times and Gazette* for May 13), to employ quinine at the Hospital for Diseases of the Skin, in the treatment of chronic urticaria; and it is asserted that he has seldom seen it to resist the influence of a course of this medicine. A severe case is mentioned in which the eruption had come out daily for the last six months; the patient was a married woman, of middle age, and of nervous temperament. The following was prescribed:—

℞ Quinæ disulph. gr. xij.
Ammon. sesquicarb. ʒi.
Magnes. carb. ℥ss.
Aquæ puræ ℥viij.
Fiat mist. ℥ss. ter die sumend.

The quinine in this mixture is, of course, undissolved. To relieve the itching of the eruption, a lotion containing dilute nitric acid was directed; Mr. S. believes it quite as useful as hydrocyanic acid for the relief of tingling, &c., while it is much less expensive.

*Hysterical Paralysis.*—The diagnostic marks of this affection, when occurring in the form of hemiplegia, are described in the following terms by Dr. Robert B. Todd, in his recently-published clinical lectures on "Paralysis, Disease of the Brain, and other Affections of the Nervous System:"—"In the hysterical hemiplegia, neither the face nor the tongue is affected, the palsy is limited to the upper and lower extremity, and is often not complete; the muscles are generally relaxed, but do not suffer much in their nutrition, as compared with those of the other side. Now and then one or both limbs may be affected with a spasm of some of the muscles, or may have a tendency to pass into cataleptic rigidity. In walking, when the palsy is pretty complete, the leg is drawn along, as if lifeless, sweeping the ground." The diagnosis is also aided by further observing the hysterical constitution of the patient herself, or of her family, and those signs which are held indicative of the ***hysterical diathesis***, such as a lax condition of the tissues generally, a peculiar fulness of the upper lip, drooping of the upper eyelid, &c., and also the absence of signs of lesion of the nervous centres.

*Iodide of Potassium in Syphilitic Periostitis.*—We quote the following remarks also from Dr. Todd's work:—"The extraordinary influence of iodide of potassium in controlling syphilitic periostitis is highly deserving of your attention. We hear a great deal about specifics, and many medicines have the name, with very slender claims to it; but if there is anything in addition to quinine, which deserves the name of a specific, it is the iodide of potassium, for syphilitic periostitis. If you have a *pure* case, it acts like a charm, so that the treatment materially aids the diagnosis. For we may fairly set it down that if the symptoms yield completely, and at once, to the influence of iodide of potassium, there is a strong reason to suspect the disease is probably syphilitic.

"But although iodide of potassium unquestionably exerts a wonderful influence over the syphilitic periosteal affections, nothing is more certain than that its effects are far from being permanent. It is very common to meet with cases which at first yield readily to its influence, and the patient continues well for a time, when all the old symptoms return.

"The knowledge of these clinical facts teaches us that we must not speedily abandon the use of the iodide, or of iodine in some other form, in cases of this description. In the present state of our knowledge, we can hardly determine whether the iodine acts by eliminating the syphilitic poison, or as an antidote: possibly it may act in both ways. It may at once promote the action of emunctories, and so increase the amount of matter excreted from the blood, and it may unite with the syphilitic poison, and form an innocuous compound, of which, however, the iodine element disappears more quickly than the syphilitic, leaving, after a time, the syphilitic in undisturbed sway in the system.

"In such cases, we must trust to the repeated use of iodine as an element of cure, care being taken to watch the constitution of the patient during its administration. And, we may aid its influence by the occasional use of mercury, either at the same time, or as I prefer it, alternately, that is, giving first, a short course of mercury, then of iodine, then of mercury, and then omitting both, and using only tonic means, both medicinal and hygienic, resuming, if occasion should demand, the mercurial and iodine treatment. And you will find great benefit from the prolonged use of well-made decoction of sarsaparilla, or of cod's liver oil, or of both.

"But you must never lose sight of the fact, that *time* is an important element of cure in these cases, and, therefore, we must be careful not to weaken the powers of our patients by our treatment, lest by doing so we should not only retard their favourable progress, but give a stronger hold to the poison.

"It will be our duty, then, to encourage our patients to expect a favourable issue; impress upon them the necessity of a steady perseverance in a general plan of treatment, and to point out the dangers of swerving from the hygienic or dietetic rules laid down for them."

***Chloride of Sodium, and Iodide of Zinc, in Granular Conjunctivitis.***—M. Tavignot has used common salt extensively in this and other affections of the eye. He uses it in the *solid* form, applied to the lid by means of a large crystal fastened in a quill, or as a very fine powder; in the form of *ointment,* made in the proportion of one to four drachms of salt to the ounce of lard; and as a collyrium, the strength varying from one to three drachms to the ounce of water. The latter preparation he considers most effectual, and esteems it highly as an application in ulcerated cornea. Constitutional treatment must, at the same time, be attended to, and the use of suitable tonics and alteratives.—*Montreal Medical Journal.*

In the same journal it is stated, that Dr. Hays, of Philadelphia, "led by the favourable reports of the efficacy of the iodide of zinc in reducing enlargements of the tonsils, to try this application in a few cases of greatly-thickened granular conjunctiva of long standing, which had proved rebellious to various remedies, was so satisfied with the result, that he strongly recommends it to the attention of the profession."

***Copaiba Capsules.***—In the *Medical Circular* a correspondent asserts, that no drug is so extensively adulterated at present as copaiba; out of 140 samples of capsules of copaiba, examined during the last three years, he found fully nine-tenths of them to consist chiefly of train or linseed oil, with common turpentine to give them consistence, and merely sufficient copaiba to give a slight odour of the drug. In many cases, *not a particle of copaiba* was contained in them. Of upwards of fifty samples of copaiba, in barrel and bottle, examined, seventeen were found to have been "lowered" by admixture with oils and common turpentine; and only twenty-six were found to answer the tests of purity required by the Edinburgh College.

Another correspondent, in the same journal, gives the following process for obtaining a solution of copaiba similar to that sold under the name of Franks' specific solution:—"Take of balsam of copaiba two parts, liquor potassæ three parts, water seven parts; boil for two or three minutes in a brightly polished copper or glazed vessel, put it in a separator and let it stand for five or six days, then draw it off from the bottom, rejecting the dregs, if any, and the upper stratum of oil. To the clear liquid add one part of sweet spirits of nitre, perfectly free from acidity, and to which a few drops of liquor potassæ have been added previously, and agitate well together. If pure copaiba has been used in the process, the solution will continue bright and transparent; if it turns milky, a few drops of liquor potassæ will brighten it; should this not succeed, it must be placed in the separator for a few days, and when clear, drawn off from the bottom."

***On the Application of Chloride of Zinc as a Caustic.***—In many cases it is of great importance, in the use of chloride of zinc as a caustic, that it should not run. Such a one is at present under the care of Mr. Cock, in Guy's Hospital, in which it is being used to destroy a polypoid growth of the nose, part of which has been extracted. A paste made with flour was first tried, but this was inconveniently moist, and liable to run. Mr. Cock now uses plaster of Paris, which answers admirably. The paste may be made of suitable consistence, and it does not afterwards become in any degree more liquid. The duration of the pain after its use in this way is generally much less than if it be used in a paste more liable to liquefy.—*Medical Times and Gazette.*

***Anodyne Cement for rendering Teeth insensible to Pain.***—Mr. J. Paterson Clark, of London, with the object of rendering diseased teeth insensible to pain, previous to the operation of stopping them permanently with metal, or filing away the carious parts, recommends the application of a paste, composed of Canada balsam and slaked lime, which is to be inserted into the hollow tooth like a pill. Mr. Clarke states, that this preparation affords immediate relief in all but chronic cases of inflammation. He says:—"If fresh pills be inserted as often as the old ones wear out, or are removed on the return of pain, in order, like an abscess, to allow the escape of matter or blood, and this practice be continued, the teeth will become as insensible to touch as the soundest, and may then be permanently stopped, and otherwise treated in the usual way, without the infliction of pain.

*Fatal Asphyxia, caused by the Detachment of a diseased Bronchial Gland, impacted in the Larynx.*—At the Royal Medical and Chirurgical Society (May 9th), Mr. George Edwards, of Wolverhampton, detailed the following interesting case, which occurred in a child of eight years of age, who, while at play, was suddenly seized with symptoms as of a fit. He was quickly carried home and became violently convulsed, although retaining consciousness and the power of utterance; the countenance became extremely anxious, and he uttered the expression, that he should die. In the hurry of the moment there was no opportunity of getting any distinct knowledge of the previous history, beyond the surmise that the boy had swallowed something. The trachea was immediately opened, a little air issued from the opening, artificial respiration was attempted, but without effect, as the child gave but two gasps after the operation, and died. The *post mortem* examination revealed the presence of a foreign body touching the under surface of the epiglottis, and extending through the rima glottidis into the larynx; the substance was whitish, and covered with mucus; on a very slight examination it was evident that the body was a bronchial gland. Upon slitting open the trachea, the spot from whence the gland had issued was soon observed; it was on the posterior part of the right side, just above the bronchial bifurcation; the opening was ragged and irregular, and communicated with a cavity behind, sufficiently large to contain a nutmeg. No other evidence of disease was observed. It was an interesting point to consider whether the suppuration commenced with the gland, or had ulceration taken place around it? Again, did the gland at once pass into the trachea, or was it a gradual process? The author offered some observations on the relation the case bore to certain medico-legal points. The detached mass had been examined by Mr. Queckett; it was of irregular shape, contracted in the centre, and of a light blueish colour, streaked with black and white. Its outer surface presented traces of epithelium and mucus; one part was covered with what appeared to be inspissated mucus. These sections were found to be made up of rounded cells, connected together by fibrous tissue. Two sections of bronchial glands were examined for the sake of comparison; a similar structure, in all respects, was observed, and Mr. Queckett was of opinion, that the impacted substance was a portion of an enlarged bronchial gland.

*Hydrophobia.*—A case of hydrophobia was admitted into Guy's Hospital, between eight and nine P. M., on Monday evening; the patient died at four, A. M., of the ensuing day. It occurred in a young man, twenty-three years of age, of robust frame, and of apparently healthy constitution. He was a plasterer and also a tumbler or juggler, moderately temperate, and lived in the Borough. The history generally is obscure, but there is clear evidence that within a period, varying, according to different statements, from five to nine years, the man was bitten by a dog, which, at the time, was supposed to be mad. The mark of an injury existed on the inner side of the knee. He was in his usual health until two days before admission, when he complained of most acute pain in his head; the next day he was thoroughly ill, and the same evening he was convulsed at the attempt to drink some porter. Throughout the day on which he entered the hospital he gradually became worse; the mention of fluid caused distressing spasmodic difficulty of breathing, and the muscular system generally was irregularly excited. He constantly rejected fluid from the stomach, and spat frothy fluid without ceasing. His intellect, and general and special sensibility, were most acute; and this state of things was aggravated when admitted. The patient's manner was then maniacal, but his mind was little disturbed. In spite of Indian hemp and chloroform, the debility consequent upon the excitement increased, until, having become gradually pulseless, he died exhausted. A *post mortem* examination has taken place.—*Lancet*, May 20th.

*Saccharized Alcoholic Extract of Ipecacuanha.*—Mr. A. G. Dunn, in the *New York Journal of Medical Science*, recommends the employment of a saccharated extract of ipecacuanha in preference to the usual preparations of the drug, such as the wine and syrup, which he considers liable to vary in strength; and the powder is, he thinks, objectionable, from its insolubility. The following is the formula for preparing the extract:—Rad. Ipecac. ℥iv.; bruise to a coarse powder, and macerate for thirty days in f℥xvi. of diluted alcohol, shaking it occasionally, then filter and express. Evaporate the tincture thus formed to ℥ii., with which mix powdered white sugar ℥viij., and triturate them in a mortar until they become dry. The extract thus prepared has the peculiar odour and taste of ipecacuan; it is of a brownish yellow colour, and soluble in water, ether, alcohol, mucilage of acacia, and in fact, in all the solutions with which this remedy is usually combined. The dose required to be exhibited is the same (twice as much) as the genuine powdered root. From its agreeable taste and perfect solubility in fluids, it is much preferred to the other preparations of the drug, by those who have employed it; more especially in prescribing for children, for whom its sweet taste renders it an excellent form for combining with other remedies.

*Modes of exhibiting Cod-liver Oil.*—Those who have had large experience of the use of cod-liver oil must have been astonished at the surprising way in which, in a great majority of cases requiring its exhibition, it agrees. It is not easy to mark out beforehand any class of symptoms which contra-indicate its employment, if the existence of strumous disease call for it. Often symptoms, apparently the most likely to be aggravated, are removed or mitigated by its use in a way which surprises both patient and prescriber. Thus, in phthisical cases, a red tongue, acid eructations, biliousness, heartburn, liability to sick headaches, aching pain between the scapulæ, an instinctive and intense dislike to fat or greasy aliment, are symptoms, which, without a question, may often be remedied by the use of cod-liver oil. These statements are, of course, applicable only to a certain proportion of cases; there are others in which its use is clearly indicated, but in which the prescriber's ingenuity is taxed to the utmost to get the patient to bear the remedy. The following memoranda on this part of the subject, founded on our observations of the practice of the various London Hospitals, but more especially of the City Hospital for Diseases of the Chest, may probably be acceptable to some of our readers.

Cases in which difficulty occurs may be divided into the following classes:—1. *Those in which the Nauseous Taste of the Oil forms the Obstacle.*—In these the use of the pale oil will generally obviate the difficulty; it is, however, four times the expense of the brown, and is more liable to be adulterated, which are great objections. The taste of the brown oil may often be concealed by taking it floating on some bitter menstruum. A wine-glassful of strong coffee, of ginger wine, of infusion of quassia, or perhaps best of all, a quinine draught, containing a drachm of the tincture of orange peel, may serve this purpose. The oil may be stirred up in a little hot milk, and swallowed so warm that the sensation of heat overpowers the taste. Should these expedients fail, the patient may be instructed to put into the mouth a teaspoonful of marmalade or of black currant preserve; and, having well lubricated all parts with the sweetmeat, so as to fully absorb the attention of the gustatory nerve, then swallow the oil. Advantage frequently results from closing the nostrils when taking the dose. 2. *Those in which the Oil excites Sickness, and is quickly rejected by Vomiting:*—Many of the expedients mentioned above will obviate also this source of difficulty, more especially the use of bitters. Very few cases indeed will resist the influence of hydrocyanic acid and bismuth exhibited three times daily for a few days preparatory to the trial of the oil, and continued during its employment. Patients should be directed to eat a little dry biscuit or bread-crust before the oil, and then to take it floating on a cup of the coldest spring water. If these fail, as a last resource, the dose should be given in the recumbent posture, that is, in the morning, an hour or two before getting up, and in the evening after going to bed. This last suggestion is one emanating, we believe, from Dr. Birkett, of the City Chest Hospital, and often answers very satisfactorily. 3. *Cases in which the Oil cannot be digested.*—This is a large and very important class. Patients complain that they have a great repugnance to the oil, that it makes them feel sick for hours afterwards, though seldom causing actual vomiting; that everything they take after it seems to taste of it, and that thus all relish for food is destroyed; that the oil "rises," either oily or with a most nauseous acid flavour. They frequently have bilious attacks; and, for a day or two in each week, probably the repugnance to the remedy is so great, that they are quite unable to overcome it. If pushed under these circumstances, the oil does more harm than good; there are, however, extremely few such cases in which careful attention to the digestive organs will not enable its administration to be successfully conducted.

We copy the following formula from the Pharmacopœia of the City Hospital for Diseases of the Chest, where it is in general use for the relief of the condition alluded to:—

"℞ Rad. rhei ʒiij., rad. zingiberis ʒij., rad. gentian. ℥iss., sod. carbon. ℥iij., aquæ pur. lb. viij."

The roots having been cut into small pieces, the infusion is made with cold water, and after standing in a cool place for about twelve hours, is strained. The mixture is clear and bright, and not in the least disagreeable to take. In cold weather it keeps well; but in summer the addition of some tincture is necessary to prevent it from becoming thick. If cough be present, it is usual to combine with each dose from half a drachm to a drachm of paregoric; if sickness, from two to three minims of the hydrocyanic acid; and if the signs of atony, a small quantity of the tincture of gentian, calumba, or hop.

By the use of this mild stomachic (a wineglassful thrice daily) for a week or two before commencing the oil, and then continuing it during the exhibition of the latter, many patients have been induced to bear it with advantage who had failed in other prior attempts to do so. The mixture is so mildly aperient that it almost never purges, and it may be continued for months together with the effect of improving most markedly both the appetite and the digestion. 4. *Cases in which the Oil, although taken easily, cannot be borne in full Quantity, and does not appear to* *produce much Benefit.*—In many cases of phthisis coming under this head, the combination of tonic medication with the use of the oil often answers well. So generally, in fact, is advantage derived from such combination, that at the Hospital for Chest Diseases there are very few patients indeed who take the oil alone. In almost all it is exhibited together with either the stomachic mixture above noticed, or some form of tonic. The favourite tonics are the sulphates of quinine and iron (gr. i. with gr. ij. ter die), or the sesquichloride of iron. The latter is extensively prescribed with the mineral acids in infusion of quassia, or, if the stomach be delicate, in the following more elegant form, which is a prescription of Dr. Risdon Bennett's:—℞ Tinct. ferri sesquichl. min. x.; acid. nitrici dil. min. x.; syr. zingib. ʒss.; aq. menthæ viridis ℥i. Ft. haust.

Notice has been made repeatedly in our hospital records during the last two years of the practice of combining the use of cod-liver oil with that of mercury in small doses long continued, which prevails extensively at the Hospital for Skin Diseases in cases of lupis and cutaneous struma, and at several other Institutions, in the treatment of chronic disease of the joints. This kind of treatment is becoming increasingly prevalent, and is certainly very applicable to many forms of strumous inflammation. The plan of giving the oil to counteract the depressing effects of a mercurial course for the cure of syphilis in cachectic states of the constitution, has also been previously mentioned, and is well worthy of being borne in mind.—*Medical Times and Gazette.*

*On the increased Frequency of Pulse after Vaccination.*—We are indebted to Dr. Tanner for the following short abstract of a paper lately published at Vienna by Dr. Gustaf Wertheim, on the Frequency of the Pulse, and the Intensity of the Exudation in the Vaccine Process:—The subjects of experiment were a man, aged thirty-eight, and a woman, thirty-three years, both previously vaccinated, and neither of whom had suffered from small-pox. The experiments were conducted in the wards of Professor Hebra, in Vienna. The general results were these:—1st. The frequency of the pulse increased up to the sixth day after vaccination; it then began to decline, but continued more frequent than before vaccination, perhaps permanently, certainly for a period of four months:—*e. g.*, the man of thirty-eight had, before vaccination, an average frequency of pulse of 66. On the first day of vaccination, the average for twenty-four hours was 69·5; second day, 64·9; third day, 64·0; fourth day, 65·8; fifth day, 67·8; sixth day, 76·8; seventh day, 76·2; eighth day, 75·9; ninth day, 70·7. The frequency of the pulse continued to fluctuate till the fourteenth day, when it again rose, and continued to increase slightly till the thirty-first day, on which it was 78·3, and it remained at about this height for about three months and a-half after the vaccination. 2nd. On vaccinating the same man 108 days after the first vaccination, a slight, transient swelling of the punctures occurred, with a temporary acceleration of the pulse. The increased frequency was only of two or three beats in the minute, and might, therefore, have been due to accidental circumstances, had it not been observed in numerous other cases. This observation would seem to show that going through the vaccine process does not destroy the person's susceptibility, but only causes such a change in him that the re-introduction of the virus produces a state similar in kind, but very much less in degree, to that resulting from the first vaccination. 3rd. The period at which the exudation was in all cases the most abundant, was the eighth day, while the pulse had attained its greatest frequency on the sixth day, and then commenced declining, never, however, as before observed, declining as low as it was before the operation.—*Lancet.*

*The Development of Worms,*—or changes which ascarides undergo in the interior of animal bodies, has given rise to a singular and interesting memoir by Ercolani and Vella. The remarkable tenacity with which worms and their all but invisible embryos hold on to life has been particularly dwelt upon. Some eggs of the lower animals were found to live eight days placed in absolute alcohol, others come to life after a month's complete desiccation. Some observations on an ascaris found in the lungs of dogs as the most common *habitat*, has led Ercolani to class such worms with the Graafian vesicle,—formation of chorion, vitelline membrane, &c.—an incubation not suspected taking place either in lungs or parietes of intestines and a perfect animal developed. Ercolani has pointed out some curious developments of these animals, a sort of retrogressive metamorphosis; the opinion of the Cysticercus being a degenerated tenia is not so far from the truth, he conceives, as is generally believed. Eggs of worms may be perfectly dry, and apparently dead, but revive on the slightest warmth and moisture.—*The Medical Circular.*

*Iodide of Potassium with Ammonia.*—The proportions prescribed are, two to three grains of the iodide, with four to five of the ammonia. It acts in three ways:—1st. As a gentle stimulus to the stomach, preventing the iodide from disagreeing. 2nd. As a diaphoretic, diffusing the remedy through the system. 3rd. By chemical decomposition.—*Medical Times.*

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## MEATH HOSPITAL.

### *Case of Strumous Disease of the Brain and its Membranes, with Acute Pericarditis.*

BY DR. LEES,

PHYSICIAN TO THE HOSPITAL.

*Reported by* Mr. E. Whitton.

A stout-looking man, æt. 36, was admitted into the Meath Hospital, on March 8th, presenting the heavy, oppressed aspect of a person in the early period of fever, and complaining of pain in the head; he appeared very unwilling to speak, got up frequently from his bed, and passed his water about the ward, as if unconscious of what he was doing. Next morning he seemed quite conscious when addressed, though he would not speak, nor protrude his tongue; his pupils appeared slightly dilated, but there was no suffusion of the face or eyes, no heat of head, nor increased action of the vessels of the neck; action of heart very feeble; pulse 56; he appeared to dislike being disturbed, and constantly pulled the bed-clothes up to his chin, *always catching them in his teeth;* he did not ask for drink, but drank greedily when it was given to him; his bowels were confined, but he passed urine freely in the bed, or about the ward, as he would not use a vessel. He was ordered to be closely observed, his head to be shaved, and his bowels to be well cleared out.

10th.—He passed a restless night, constantly getting up, and walking about, without speaking or taking notice of any one. His general symptoms were the same as yesterday, but the pulse had fallen to forty beats in the minute; the heart's action was regular, and of the natural strength. We now (for the first time) were able to ascertain from his friends, that his illness had commenced a fortnight previously, with rigors, and pain in the head; but that he had continued at his work up to the day before his admission. He was now ordered to take calomel in small doses, repeated frequently, and a large blister over the scalp.

Next day, 11th.—Same state, pulse 42; 12th, pulse 45; 13th, pulse 60; 14th, pulse 68; 15th, pulse 84; the action of the heart on this day became excited, and he appeared (for the first time) to be rather stupid; mercury was still continued, internally and externally, but without exciting any tendency to salivation.

16th.—He appeared more conscious, and looked better, pulse 118; his face was flushed; there was increased action of the vessels of the neck, and on examining his chest, a wavy pulsation was evident over the base of the præcordial region; a distinct, single, superficial murmur was heard over this part, and also at the apex of the heart, appearing to follow the first sound, and made more audible by increasing pressure over it.

17th.—Pulse 120; 18th, pulse 124; a well-marked friction sound was now heard over the right pleura.

19th.—Died quietly this day, without any coma, convulsions, or paralysis, except slight strabismus, a short time previous to death.

The body was examined thirty hours after death.

The surface of the brain was very vascular; the veins distended with dark blood; while the vessels of the pia mater were congested with bright arterial blood. This membrane was very firm, and adherent to the brain; on cutting into its substance, the lateral ventricles appeared distended with fluid, their walls diffluent, like cream, and broken down, floating in shreds; the central parts of the brain were also softened, and broke down on the slightest touch. The pia mater at the base of the brain was very vascular, and a well-marked deposit of greenish granular tubercular lymph was infiltrated in it, and extended from the decussation of the optic nerves along the fissure of Sylvius, accompanying the vessels. The costal and pulmonary pleura were universally adherent; but their adhesions on the right side appeared to be of recent date, and a number of small tubercles covered the surface of the costal pleura. The upper part of the left lung was filled with miliary tubercles; the pericardium was vascular opposite to the base and apex of the heart, where there existed well-marked patches of granular lymph; the internal lining membrane of the heart was very vascular, but no deposit of lymph had occurred in the valves. The kidneys appeared congested; the contents of the urinary bladder were carefully drawn off with a catheter (as we had never been able to procure any of his urine during life), and, being carefully examined by Mr. Leet, were found to contain a great excess of both alkaline and earthy phosphates.

This case is very interesting and important, as illustrating not only the insidious nature of cerebral diseases, but also the dangerous complications which may arise in that state of the system, termed *acute tuberculosis.* As far as the brain was concerned, it and its membranes presented the morbid appearances so constantly met with in children who die of what is popularly termed "water on the brain," or, technically, "acute hydrocephalus," but which, in many cases, better deserves the name of "tubercular meningitis," as this term expresses the condition of the cerebral membranes, which, in the majority of cases, constitutes its pathological character. On admission, his manner was so strange, but without any excitement or delirium, that at first a suspicion suggested itself as to whether it was not a case of incipient insanity. Some of the students thought he was suffering from the effects of intoxication, owing to the peculiar tipsy leer which his countenance assumed whenever he was asked any questions; but the appearance of his face and eyes, the cool state of his head, and the low condition of the circulation, excluded this view. I therefore regarded it as a case of disease of the brain, or its membranes, though the absence of many of the usual symptoms of acute inflammation of these parts made me hesitate at first, *in the absence of any history of the case,* in deciding as to its precise nature; thus there was no delirium, no heat of head, no vomiting, and the slight dilatation of the pupils was scarcely sufficient to indicate any disease of the brain, so that we had to depend on the pulse as our chief guide; but it proved a valuable and unerring one, as its gradual declension for the first three days, and then, its progressive rising day by day, accurately indicated the course of the disease.

In this case the inflammation of the pericardium would be sufficient to account for the rising of the pulse on the fifteenth and subsequent days, though it is a curious fact that, as a general rule, the pulse does increase in frequency towards the latter periods of these cases of effusion into the ventricles of the brain, while the quantity of effused fluid is increasing, and thus causing an additional amount of pressure on this organ. The differential diagnosis as to the exact nature of this disease, whether it was simple acute meningitis, or the tubercular form, was, in this case, rendered very difficult, owing to the want of any accurate information as to his family or previous history, and also from the general appearance of the man himself, as he did not present any sign of the strumous diathesis; and though French writers have laid down some broad distinctions between these two forms of disease, particularly when occurring in children, yet we find that they may be almost all resolved into ascertaining the presence or absence of the strumous diathesis, which is well marked in most of these patients, as the majority of those attacked with tubercular meningitis have been also sufferers from previous tubercular disease of the lungs or peritoneum.

The murmur heard over the heart involved a nice point of diagnosis, as the fact of its being single made some of the advanced pupils diagnose it to be an endocardial murmur; but the superficial character of the sound, its variability of tone in different parts, its limitation to the præcordial region, and its being made louder by pressure, led me to consider it as a pericardial murmur; and in this opinion I was confirmed by my friends, Drs. Hudson and Williams, who observed the case with me. As to the wavy pulsation over the base of the heart, I consider it was owing to a greatly distended right auricle, that chamber being more than double its normal size, and quite sufficient to account for this appearance. Of the tubercular nature of the disease I have no doubt on my own mind, as the anatomical characters exactly resembled those I have frequently met with in infants and children who have died of this peculiar form of meningitis, and the combination of tubercles in the lung and pleura of this patient confirms me in my opinion. I was curious to ascertain if the lymph effused on the pericardium was of a tubercular character, but Mr. Ledwich, who examined it carefully for me under the microscope, considered it as being ordinary

hough I am inclined to regard it as a
ıbercular pericarditis, at least as arising
influence of that peculiar morbid dia-
ich we term tubercular; but why, in
the disease should remain for a long
ıt in the system, and then be suddenly
o action, in particular parts, without
n exciting cause, while in another it
its existence at an early period, and
ll-marked though slow inroads on the
on, through what we may term its
hs, is a problem which I confess I am
o solve.

---

## ALCULI IN THE KIDNEY, WITH ABSCESSES OPENING EXTERNALLY.

LLON KELLY, M.R.C.S.I., MULLINGAR.

., æt. 40, tall, dark-haired, and stru-
ing, with considerable sebaceous deve-
when about twelve years old, got com-
etted by a heavy shower, in weeding
lower bed, and remained out till her
ied on her.

evening she had a regular rigor, to
cceeded a febrile attack of smart cha-
d of four or five days' duration; the
ninent symptoms being, first, headach
, to which succeeded pain in the left
rred to the site of the angles of the
enth ribs, but which disappeared on
lence of the fever.

ous periods since, a similar pain in the
attacked her, more especially after
ıe, and at times hæmaturia and dysuria,
her short duration, and for which she
t no treatment except domestic.

er marriage all these symptoms dis-
for years, and she acquired considerable
t; but at times the pain in her left
yed her; and during those periods she
th considerable quantities of the phos-

eighteen years since, she had a hydro-
nfant, which survived for nine or ten
nd whose head certainly equalled in
n record of a similar age.

rs since, having suffered a severe men-
the pain in her side again became very
ne, for which she underwent a mild
course, was blistered, and afterwards
d with croton oil, with temporary re-
next, under the advice of a lady, dosed
ith alkalies till her strength gave way
ir infliction, and with, as a necessary
ce, an increase in the phosphates.

hen she has been frequently prostrated
hours, or a day or two, with sensations
g and weakness referred to the side,
hich, so great was the debility they
that she could not sit upright, and to these always succeeded retching and ejection of bilious matter, after which she at once rallied.

Six months since she sent for me, when she presented the following symptoms:—marked emaciation, great debility, pain in left side, but now referred to the lumbar region, "breaking" pain in the back and loins when in the erect position, frequent hysterical fainting, catamenia irregular, appetite fastidious, bowels confined, pulse eighty-four, tongue clean, spirits greatly depressed.

Urine 1·018, reaction acid, extremely fetid for about twenty minutes after being parted with, loaded to excess with phosphates, mucus, and pus, with at times a sedimentary clot of blood, underlying the pus; occasionally dysuria and tenesmus.

Examining the condition of the abdomen, I found a strumous-looking fistulous orifice in the left groin, the sequelæ of a tumour of slow growth, which had broken about three or four months before, and from which a few drops of serous pus could at any time be pressed out.

Equidistant from the umbilicus, the last rib, and the anterior superior spinous process of the ilium, a dumb-bell shaped tumour of nodulated outline, could be felt beneath the abdominal parietes; sore on direct pressure downwards, but exquisitely sensitive and painful when grasped or pressed on laterally, to a certain extent mobile, and conveying to herself the sensation of falling over, whenever she turned on her right side.

Occasionally, too, she felt convinced that it contained wind, but that was dependent on its position beneath the small intestines and colon.

The diagnosis was abscess of the kidney, with most likely some affection of the left ovary.

The treatment:—nitrous acid, uva ursi, iron, quinine, with a liniment of cod liver oil and iodine, and good nourishment.

Under this treatment the phosphates and mucus disappeared, but the pus still continued, with an occasional sedimentary clot. She gained a little strength; but her hysteria was rather worse, and in addition she complained of soreness and shooting pains along the spine on pressure or motion.

The spinal soreness was complicated with a distressing feeling of heat which could only be allayed by the application of a wetted roll of linen over its tract, and at times her extremities were to her feel so painfully warm, that bathing in cold water alone was capable of affording her relief.

At that period I had the assistance of Dr. Charles Duigan, who, without any hint on my part, was of precisely a similar opinion; and who suggested the bathing of her feet, which were slightly œdematous, in a tepid infusion of horse radish, also a trial of the citrate of iron and quinine, as she had taken an aversion to the sulphate.

For a few days this agreed with her; but her stomach again revolted, and it was laid aside: the horse radish, however, removed the œdema of the feet, which did not return.

Again, another tumour gradually formed in the groin, which at length burst, giving exit to a considerable discharge of thick, extremely fetid, and darkish pus; and a week before her death a similar tumour again formed and burst somewhat nearer the labium.

From the period of the appearance of the last tumour but one, the pus disappeared from the urine, and did not again return.

For the last six weeks of her life her stomach rejected everything in the form of either stimulus or nourishment, and she finally sank from exhaustion, dying, in the language of her nurse, by degrees; first a leg, then an arm, then the opposite leg and arm, and lastly her head.

I should have said, that for two months prior to her dissolution, diarrhœa was an almost constant symptom, with at times violent attacks of vomiting, when large quantities of bilious matter were ejected; the sickness of stomach being invariably preceded by pyrosis, and to the day before her death her pulse never exceeded eighty-four.

For the diarrhœa, acetate of lead, matico, tincture of opium, rhatany, and compound powder of kino were successfully had recourse to. For the latter, blisters over the pit of the stomach at once gave relief.

The final struggle was protracted for seventeen hours; she occasionally giving vent to the most agonizing screams, and repeatedly requesting her attendants to wrench off her feet, the pains in which she said were most excruciating.

*Autopsy*, twenty-one hours after death, at which I was assisted by Dr. Duigan.—Body and extremities extremely emaciated; abdomen collapsed; pubis and anterior iliac spines standing upwards in high relief; left groin the seat of two oval, strumous-looking ulcerations, the openings of the abscesses, the lower in a semi-gangrenous state, from which thick, darkish, fetid pus welled out when pressure was made over the site of the tumour; cadaveric rigidity absent.

On cutting through the abdominal parietes, the quantity of fat in the integument bore no proportion whatever to the state of emaciation, and the greater omentum and mesentery were comparatively loaded with it.

Turning back the omentum majus, the colon was found greatly contracted, and its sacculi partially obliterated, so that it presented scarcely any contrast to the small intestines.

Lifting the latter out of the pelvis, the bladder, uterus, and ovaries were perfectly *in situ*, and natural in appearance; the bladder, much contracted, contained scarcely any urine, and the uterus looked and felt like that of a virgin.

Bringing the kidneys into view, the left, enormously enlarged, stood out in high relief, its distal extremity resting on the ala of the ilium, to which it was firmly adherent; its body, in like manner adhering to the lumbar vertebræ, was apparently impacted with calculi, which grated against each other like pieces of broken china; superior extremity large and partially bent over the spine, so that it was for a moment supposed to be of the horse-shoe variety.

Right kidney large, but natural; liver pale; gall-bladder full of bile; spleen rather round; stomach normal; all these viscera, together with the peritoneum, remarkably dry-looking.

Passing a stilet through the lower opening in the groin, it could be traced into a cavity circumscribed by adhesions, and bounded anteriorly by the posterior layer of the peritoneum.

Cutting it open, a nipple-like process, of a large calculus projecting through an opening in the anterior aspect of the kidney was displayed; thus demonstrating the nodulated tumour felt during life in that region.

The kidney, twenty-three and a-half ounces in weight, being divided longitudinally, presented an appearance almost unique, five-sixths of its medullary portion being of a blueish leaden colour, as if dyed with some dark pigment. In feel, it was cartilaginous, and in some parts traversed by striæ. Its calices were completely loaded with thick, darkish-looking pus, some of them, in addition, containing calculi.

The calculi were of all forms, the largest weighing twelve drachms, fifteen grains, bearing a very great resemblance to that of J. B—'s, in Dr. Lees' paper on calculi in the kidney, in vol. vii. of the "Dublin Quarterly Journal of Medical Science." It was contained in a smooth, shining, firm cyst of pyogenic membrane. From its size, it encroached on the pelvis of the kidney, and completely obstructed the flow of pus through the ureter, whilst the pressure of its nipple-like process against the cortical substance produced its absorption, thus giving exit to the imprisoned pus, and producing the abscess in the iliac fascia by dissection.

There were five or six smaller calculi; one smooth, ovoid, consisted of phosphate of lime, with a nucleus of uric acid; another horse-shoe shaped, irregular, and granular on its surface, was a specimen of fusible calculus, composed of triple phosphate and phosphate of lime.

## REMARKS ON THE QUININE TREATMENT OF YELLOW FEVER.

BY WM. J. CUMMINS, M.D., M.R.C.S.E., &c.,
FORMERLY SURGEON ROYAL MAIL COMPANY.

The treatment of yellow fever by large doses of quinine, frequently repeated, was adopted very generally in the West Indies, during the late epidemic of the disease, and with most remarkable success in the hands of those who administered it with boldness, promptitude, and decision, and, at the same time, with judgment; while, on the other hand, it was, after a short trial, excluded from the prescriptions of those who, not taking into account the rapidly fatal nature of the disease, temporised with small doses, until the patient's death led them to regard the medicine they had only half tried, as useless.

It is notorious that a feeling exists in the public mind in favour of specifics, and medicines whose action cannot easily be explained; but fortunately the reverse is the case amongst scientific members of the medical profession; consequently each one is ready to exclaim, "Although I admit that quinine is an anti-periodic of great power, and as such cures agues, &c., I cannot conceive how it could prove useful in a fever unmarked by intermission* or remission."

Such was my feeling when called upon to treat yellow fever, and I used quinine at first, only because I knew no better remedy. In a short time, however, experience made me value it, as I found it capable not only of curing the disease when fully established, but also of cutting it short, if prescribed sufficiently early.

Yellow fever, as well as all other fevers, presents a striking distinction between the phenomena both of its second and third stages in different cases; for example, in one patient we may find, on the second day of the disease, a feverish condition, and in another, at the same period, the very reverse: in one, symptoms of inflammation of the gastro-intestinal mucous membrane; in another, a perfect freedom from indication of any such affection: in one, suppression of urine; in another, this secretion is copious, although of low specific gravity; in one, a dry skin, in another a moist; in one a yellow skin, in another the natural colour; in one, hæmorrhages of various kinds, in another none, &c.

Thus we find that the phenomena of this fever are by no means constant, and are frequently opposite conditions. M. Louis has proved that the same remarks are applicable to the anatomical changes discovered post mortem. How, then, can any specific for such a disease exist, unless it possess opposite powers?†

The answer to this question can alone be:—there are two principles of treatment for fevers; the one founded on our knowledge that these diseases tend to a spontaneous cure, or in other words, that the fever poison will wear itself out of the system, and terminate the disease by what we call crisis at a certain period, and consisting of remedies applicable to the effects of the poison, or the indirect symptoms produced by it, so as to retain life, and prevent irremediable local change, until crisis has arrived, and the fever has terminated of its own accord: the other is the specific principle of treatment, which assumes that all the inconstant and opposite phenomena are effects of a general cause, which is itself the first effect of the poison applied from without by contagion, or atmospheric contamination, and on the removal of which, secondary and tertiary effects frequently cease of their own accord.

Of these two principles of treatment, the former has been found very efficacious in the fevers of temperate climates (with, perhaps, the exception of congestive typhus and scarlatina), because as these are not rapidly destructive of life or tissue, time is granted for their full use; but such is not the case in tropical fevers, and especially that known as yellow fever, where effect follows cause, and in its turn becomes a secondary cause, with such alarming rapidity.

For this reason, although I endeavour to treat both cause and effect in the latter disease, I have most confidence in the remedies for the cause. We shall see in the sequel how quinine treats the cause.

During the months of October, November, and December, 1852, I continued to prescribe quinine empirically, and my reliance on it as a specific mode of cure increased daily, so much so, that during a lull of the epidemic, I determined to take the medicine myself, in order to test its effect in large doses, frequently repeated on the healthy subject.

The first few doses produced slight giddiness, or rather, lightness of head, and a complete state of nervous irritability, so much so, that the least unusual motion of the ship, or even the sudden entrance of any person to my cabin, or touching me, caused an involuntary start; indeed the entire surface of my body presented a morbid sensibility, though without pain. My pulse slightly increased in force and frequency soon after a dose, fell below the natural standard in fourteen or fifteen hours, and a dose taken at bed time caused restlessness and insomnia for several hours, followed by disturbed and unrefreshing sleep. I had no deafness, but palpitation and dyspnœa occasionally attacked me for a few moments at a time during the whole time I was cinchonised, and were always brought on by smoking, which I had to give up entirely. There was no irritability of the bowels produced in my own case, nor do I remember to have noticed that quinine caused it in any of my patients.‡

Thus, all the sensations I experienced when under the influence of quinine, induced me to suppose that in large doses it causes a direct increase of the yis nervosa, or, in other words, stimulates the vital energy of the nervous system. If such is its real action, how does it cure yellow fever? The answer to this question must be found out by studying the disease, as follows:—

---

* Some authors consider yellow fever a remittent disease; it may be so in some epidemics, but in my experience of it during the epidemic of 1851-2, in Rio de Janeiro, and of 1852-3, in the West Indies, I have never seen a remission in any case uncomplicated by the bilious remittent fever.

† Dr. Corrigan objects to any specific for fever on such grounds.

‡ Dr. Corrigan has observed that the quinine treatment of fever causes irritation of the bowels.

1st.—All agencies which cause a depression of *the vital energy* of the system, such as intoxication, fear, anxiety, improper food, deficient ventilation, insufficiently-drained residence, sudden removal to a hot climate, great heat, &c., &c., dispose the system to the reception of the poison which is the exciting cause of yellow fever.

2nd.—Agencies which cause a continued stimulus of the system are prophylactic of the disease.

[Dr. Annesley, alluding to the general opinion that stimulants guard the system from the injurious action of malaria, writes:—"But the excitement thus occasioned requires to be kept up *moderately and equably*, not to reach above a certain pitch, or fall below it." He does not, however, think the action of ordinary stimulants could be so regulated.—*Tropical Diseases*, p. 416.

Dr. Rush (although considering intoxication a predisposing cause of yellow fever) instances several persons who were *constantly* under the influence of strong drink, and yet escaped the disease during the entire time of its prevalence, and he explains their immunity, by stating that the stimulus of ardent spirits excited an artificial fever, which defended the system from the epidemic.—*Yellow Fever of Philadelphia*, p. 100.

It has been remarked that the cholera poison, which resembles that of yellow fever in many of its peculiarities, though taking effect most readily on those enfeebled by disease, or other cause, rarely attacks those afflicted with a disease *which keeps up a continued febrile action.—British and Foreign Medico-Chirurgical Review*, January, 1851, p. 51.

Quinine is a most excellent prophylactic of yellow fever, and of other diseases which cause a depression of the vital energy of the nervous system; and there can be little doubt that it acts by producing a tonic stimulus of that system, and thus antagonizing the primary operation of certain poisons.]

3rd.—Thus, from considerations external to the disease itself, we may draw a conclusion that the *exciting cause* of yellow fever is a depressing agent; and if so, the first stage of the disease ought to be one of depression or minus vitality. We shall see in the sequel whether such is the case, as on the solution of the question will mainly depend the applicability of quinine to its scientific treatment.

"In essential affections," writes Dr. Stokes, "we have, as the first condition, a change affecting the entire organism, in which it acts apparently under a new system of vital laws. Secondly, a special local, but still vital, or non-mechanical alteration; and thirdly, the anatomical change." We can apply this excellent description of essential diseases to yellow fever, and assuming that the first stage is one of minus vitality, can understand how the phenomena which constitute the second and third stages, viz., disorder of the circulation (*i. e.*, congestion, followed by reaction, and resulting in hæmorrhages, &c., in the larger proportion of cases), and of the functions of nutrition, secretion, and excretion (which, in their turn, may cause local inflammations, and a secondary diseased condition of the blood), may be looked upon as its effects, without deviating from established physiological principles, which space does not permit our entering upon at present, or applying to them; as it would be wandering from the actual subject in hand, viz., to establish what we have already assumed, that the primary effect of the exciting cause of yellow fever is a condition of minus vitality, or depression of vital energy, and for this purpose I shall quote a few passages from authors on the subject.

Dr. Adolphus, in his official Report of the Yellow Fever of Jamaica, of 1824 (published by Dr. Annesley, in his work on Tropical Climates), writes thus:—"Its appearance was not characterized by any great degree of vascular excitement; on the contrary, there seemed to be a remarkable depression of all the vital energies."

Dr. Rush (Yellow Fever of Philadelphia, of 1793) tells us that there is sometimes a threatening of attack for two or three days, natural energy depressed, occasional sense of cold and pains in the head, slightly congested, dull eye, restlessness, and want of appetite; and, again, that the attack often comes on with a weak pulse, sometimes with a preternatural slowness of the circulation; he mentions a case where the pulse was only forty-four, and another forty-eight, in the minute, and in some of his cases there was a disposition to syncope and sighing.

Dr. Stephens (Letter to College of Physicians of Philadelphia, published by Rush) states that the "cause producing yellow fever is a strong debilitating power, and that the symptoms occasioned by its application indicate extreme debility in the animal functions, and great derangement of the nervous system.

Shafter, Chisholm, and Physic remarked that the pulse was slow in the first stage of yellow fever, temperature unnaturally cool, constant sighing, respiration hurried.

"Malignant continued fever," writes Dr. Annesley (Treatise on Diseases of Tropical Climates, vol. ii. pages 433 and 4), as well as the more malignant forms of remittent fever, betray symptoms of exhaustion or the adynamic state from the earliest appearance of the disorder; this state follows immediately upon the impression of the exciting causes.

"Again, in those instances where, from the activity of the cause, or of the state of the individual, the powers of life are so overwhelmed, as scarcely to admit of reaction, the patient seems to sink progressively from the period of attack, the most energetic means employed with a full view of rousing the energies of life being often insufficient to induce excitement, and enable the secreting viscera to perform their functions."

Shapter thus describes malignant yellow fever: —"Throughout the attack, there is not the slightest evidence of any vascular excitement."

In addition to these authorities, I may state, that in all the cases of yellow fever I have myself watched from the commencement, I have noticed that a stage of depression of the vital powers is the first indication of disease having commenced; that this stage varies in its duration in different epidemics, in portions of epidemics, and in individual cases occurring at the same period of an epidemic; but is always longer and better marked in this than in the fevers of temperate climates I have witnessed; that in some cases it is continued throughout the entire course of the disease, so that death appears to result from a concentrated poison having directly abstracted the vitality of the whole organism. Such cases as these are described by M. Louis (Louis on Yellow Fever of Gibraltar, of 1828, translated by Dr. Shattuck, Jun.), at least he referred the death, in a third part of his cases, directly "*to a cause unequal in its operations*," as he was unable to account for it by the effects produced.

It may be well to mention here that this great pathologist, after having visited Gibraltar in 1828, for the sole purpose of making yellow fever his study, and having made many observations, and many post mortems, came to the conclusion that because an unknown cause of the disease is the direct cause of death in many cases, "*the rejection of empirical treatment*" for yellow fever, "*no matter how absurd, is not warranted.*"—Ibid. page 333.

Now to recapitulate a little. From a consideration of the disease itself, of its known and unknown causes, of its prophylactic remedies, &c., it may fairly be inferred, that the old doctrine of Cullen is applicable to yellow fever, viz.:—that a stage of diminished vital energy is the first link in the chain of its phenomena; from a study of the action of quinine on the healthy subject the conclusion may be drawn, that it increases the vital energy of the nervous system, and is thus not only antagonistic of the operation of the poison, but is also capable of removing its primary effect, or the cause of the subsequent lesions of function and structure; and lastly, from its clinical administration, it may be said that it is practically capable of curing yellow fever.

This last point leads us on to a new subject, viz., its mode of administration; however, as some details on this point have been published in one of my former papers, in the *Lancet* of July 2nd, 1853, and reprinted in *Braithwaite's Retrospect* (December volume, 1853), I need only remark, that as a large amount of nervous depression is present in yellow fever, much beyond the ordinary dose is requisite to insure its good effect.* I usually give from ten to twenty grains, repeated every second or third hour, and proportioned to the amount of depression present in each individual case. No rules can be laid down, but the best way of measuring the amount of depression is by its effects; general congestion is the most prominent of these,—even the heart is often congested, or its action clogged.

Early deafness, or dilatation of the pupil, are bad signs; they show a disposition to the establishment of the secondary effect of the quinine, *i. e.* the depression following the first effect of all stimulants; and large doses are more apt to produce them than smaller ones, frequently repeated.

I think a long interval (more than from four to six hours if possible) should never be allowed to elapse between the doses of quinine, and when we wish to give up the medicine, it should be done by gradually decreasing the dose, rather than by laying it aside suddenly.

Quinine may cause complete amaurosis; I had two interesting cases of this kind, which occurred almost simultaneously, and it is curious that they were both natives of the south of Europe, one of Spain, and the other of Italy; but I shall make them the subject of a future communication, for as it is, I have to apologise for occupying so much valuable space; and in conclusion, I beg leave to offer the remark of M. Louis in favour of empiricism, quoted above, as my apology if I have theorised too much in this paper, for surely it is more scientific even to carry hypothesis too far, than to draw from the study of pathology an indication for quackery.

16, *Patrick's Hill, Cork.*

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## ILLUSTRATIONS OF THE POISONOUS EFFECTS OF EXTRACT OF BELLADONNA.

BY DR. M'DOWEL,

PHYSICIAN TO THE WHITWORTH AND HARDWICKE HOSPITALS.

At half past five o'clock, Saturday morning, May 27, two drachms of fresh extract of belladonna were administered by mistake to A. B., a woman much enfeebled in body, and advanced in years, being 74 or 75 years of age. The symptoms were not slow in becoming developed; twenty minutes afterwards she left her bed, and was observed to fall immediately to the floor, in a state of insensibility; when placed again in bed, she was apparently lifeless. In a few minutes, medical assistance was procured; the condition of the patient was the following: she lay on her back profoundly insensible; the eyelids were closed, the heart's action was extremely feeble, and the pulse scarcely perceptible; convulsive movements of the muscles of the face occurred at short intervals, and the mouth was distorted; the eyelids were so firmly closed, that the condition of the pupils could not be ascertained; the extremities were cold; the patient was wholly unable to swallow, so that stimulants could not be introduced into the stomach: but ammonia was assiduously applied to the nostrils, warmth to the surface, and a blister to the nape of the neck.

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* The same remark is applicable to wine in typhus fever, witness the almost incredible quantities consumed by some patients, without intoxication following, and how suddenly (as Dr. Corrigan remarks) it must be left off when crisis becomes established.

No suspicion was, at this period, entertained but that the symptoms above described were associated with an apoplectic seizure. After a little, the power of swallowing was regained in a slight degree, and a portion of a stimulant draught was got down. Low, muttering delirium was now observed, but the patient was unable to articulate, and remained as insensible as before.

At half-past seven o'clock it was first ascertained that belladonna had been accidentally administered. Sulphate of zinc and mustard were at once given in full emetic doses, and a stimulant enema administered. Vomiting could not be excited. In the meantime, the stomach pump was procured, and without further delay the contents of the stomach were thoroughly evacuated. A considerable quantity of undissolved extract of belladonna was pumped out, so much, indeed, as to block the eyes of the tube, and clog the valves of the syringe. The pump was employed until the water injected was returned clear and free from admixture with any particles of the poison; some strong tea was then administered.

At ten o'clock a considerable improvement had taken place: the surface was warm, and the pulse had regained its fulness, but the patient was yet insensible, and swallowed with difficulty. The pupil of the right eye was moderately dilated (the left eye had been for some years disorganized); vision was lost. There was no paralysis, and the convulsive movements of the face had ceased, but the face had a rigid aspect, and the patient muttered a good deal. Stimulants were prescribed, whiskey and water in small quantities, to be given frequently, and whiskey and ether administered by the rectum; sinapisms to be applied to the calves of the legs.

During the day, she rallied and gained strength —in the evening, the dilatation of the pupil was more decided, and delirium increased. During the early part of the night, the patient became very violent, and with difficulty was restrained from laying hands on the persons about her. Subsequently she became more tranquil, and slept calmly.

Sunday.—All the alarming symptoms have disappeared, but the pupil is still dilated, and the patient is quite incoherent; her articulation also is indistinct. Pulse regular and full; stimulants to be discontinued. To have beef-tea, *ad libitum.*

Monday.—Some indistinctness of vision alone remains, probably depending on the continued dilatation of the pupil. The patient is quite rational, and says she recollects having got something which made her quite drunk.

In a few days she had regained her usual health.

*Observations.*—The symptoms here recorded are essentially the same as have been observed in other cases where belladonna or its alkaloid have been taken in poisonous doses. Of these the most remarkable were, dilatation of the pupil, convulsive twitches of the face, collapse, and profound stupor, followed by violent delirium. In the order of development of the symptoms, however, there are some peculiarities deserving of notice. Dr. Christison says, that "poisoning with belladonna is rarely fatal," but the reason he assigns for the infrequency of a fatal termination, under such circumstances, is not confirmed by our observation of the case above detailed, "for," he adds, "*as the state first induced is delirium, not sopor,* suspicion is soon excited, and emetics may be made to act before a sufficient quantity of the poison has been absorbed to prove fatal." Here the usual order of symptoms would appear to have been reversed, for there was *first sopor* (or rather coma), which occurred very suddenly, and presented all the features of profound apoplexy. The characteristic delirium was developed at a much later period.

By a comparison of the cases recorded by Christison and others, I find that the symptoms were developed more rapidly than usual in the case above detailed.

The narcotic properties of the drug were in this instance developed to an unusual degree, owing, it may be presumed, to the very large quantity which was taken. That a profound impression was made upon the nervous system was evident from the absolute insensibility of the patient, the loss of the power of deglutition, and the impossibility of exciting the stomach to reject the poison by the most active emetics. Hence, it is to the prompt use of the stomach pump, by which the great mass of the poison was mechanically removed, that the patient's recovery must, in a great degree, be attributed.

The strong resemblance which the symptoms re to those of an apoplectic attack in the first itance, is of obvious importance with refe- ice to diagnosis.

There is as yet, I believe, a want of unanimity of opinion as to the relative efficiency of tain medicines, when administered by the uth and by the rectum. Of the great acti- y of belladonna, when employed by the latter thod, I have had convincing proof, having on e occasion seen the most violent and even rming symptons to result, from an enema itaining two grains of the extract, which was escribed for a case of fissure of the anus, at- ided with even more than the ordinary pain that affection.

Gay delirium, and maniacal excitement, cold rspirations, a sense of suffocation, and extreme xiety, with great dilatation of the pupils, and tal blindness, which lasted for three days, were nongst the most remarkable symptoms ob- rved.

Dr. Simpson has also seen violent symptoms result from the administration of two grains the extract, in the form of a suppository.

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## PATHOLOGICAL SOCIETY MEETINGS.

### *March 18th.*

Dr. FLEMING in the Chair.

*hthisis—Gastric Symptoms in ; Constipation ; Sudden Death ; Fatty Condition of Heart and Liver ; Extensive Ulceration of Intestines.*

**Dr. Gordon** exhibited the post mortem ap- earances in a case of phthisis, which was at- nded by some unusual phenomena.

*Case reported by* Mr. Crawford.

John Bedford, a labourer, æt. 35, was admit- d into the Whitworth Hospital, February 1, 854. He was upwards of six feet high, with a oad, but very flat chest. He stated that about ur months ago he got a wetting which was fol- wed by a cough. He never had any pain in is chest, nor was the cough troublesome. At e same time he lost his appetite, was attacked ith pain in the stomach, was able to make use very little food, and became subject to dry tching in the afternoon. It was for this he as admitted. He did not complain of any ugh for several days after admission, nor until osely questioned about it.

The tongue was slightly furred, white and very oad; the pulse small, but regular. There was nderness on pressure over the epigastrium, and e bowels were obstinately confined. There was ight bronchial breathing at the apices of both ngs. Croton oil liniment rubbed over the epigas- ium and small doses of bismuth and soda relieved e vomiting. But a fortnight after admission he as seized with aphonia, great heat and pain in the throat, and a burning sensation when attempting to swallow; but there was no regurgitation of food through the nares, nor any pain on moving the larynx. The uvula was long and œdematous; it and the tonsils and pharynx were covered with minute aphthous ulcerations. The bronchial respiration gradually spread downwards over both lungs, accompanied by increased resonance of voice, without any crepitation, and without any dulness. The general symptoms also indicated the rapid progress of tubercular development; night perspirations became profuse, and debility rapidly increased; the irritability of the stomach recurred. He still complained of obstinate constipation. His cough was now troublesome, had a ringing tone, but rather weak; he slept a good deal, but raved frequently, even while lying awake. He died on the 12th of March, rather unexpectedly, immediately after eating a very hearty dinner.

*Post Mortem Examination.*—The gastro-pulmonary mucous membrane was most extensively diseased; the epiglottis was much thickened, and its lingual and laryngeal surfaces were both covered with minute superficial ulcers; the mucous membrane of the larynx was more deeply ulcerated; the ulcers were also paler and more irregular. This character of ulceration extended through the trachea and bronchial tubes, and contrasted strongly with the intense red colour of the mucous membrane. Both lungs were extensively solidified by the deposition of tubercles, which were exceedingly small and hard, having to the touch the sensation of gravel or sand. At the apex of the left lung the tubercles were more closely collected together, and had formed a tumour which, having caused obliteration of the pleura, appeared to be projecting still further externally; the right lung was perfectly free from adhesions. In its apex there was a small mass of tubercular matter, which was in the early stage of softening. There was a copious deposition of small miliary tubercle beneath the serous covering of both lungs.

The tongue, tonsils, and pharynx were still covered with small minute ulcers; the stomach at its pyloric extremity was very red and vascular, but there was no other abnormal appearance in it. The ilium, cœcum, and colon were, thoughout their entire length, most extensively ulcerated. The ulcerations existed chiefly in patches, and in several instances had destroyed the submucous coat; the corresponding portions of peritoneum were generally marked by a light blue colour and a patch of well injected vessels. This serous membrane generally was covered over with minute tubercular deposit; but there was no effusion of lymph or serum into its cavity; the omentum was unusually fatty.

The heart was large, loaded with fat, both sides were filled with black coagulum. The liver was very large and soft, and presented the usual anatomical characters of the fatty liver. The spleen was exceedingly soft and friable. The genito-urinary system presented nothing abnormal.

*Remarks.*—The occurrence of gastric symptoms, such as the above, are by no means unusual in phthisis, but seldom occur with such severity in the early stage of the disease, at which period they are usually to be attributed to the severity of the cough. When occurring as a late symptom, they are generally very severe, and indicative of organic changes in the mucous membrane of the stomach. In the present instance the position was rather reversed; the case was evidently one of very rapid phthisis. The gastric symptoms occurred rather early in the disease; were very severe in their character; yet post mortem examination showed no organic change in the mucous membrane of the stomach, merely vascularity of the pyloric extremity.

In this case was also observable what Louis had already drawn attention to—the severity of the gastric symptoms absorbing the attention of the patients so completely, that they dislike answering questions unconnected with it; it was almost impossible to make this patient answer any question relative to the cough or other thoracic affection, while he was most eloquent and discursive as to the gastric symptoms.

The next point worthy of observation is, that during the entire of this man's stay in hospital, upwards of five weeks, he suffered from constipation of the bowels, yet the intestines were found most extensively ulcerated, the ulceration being of the character so frequently found in phthisis—large, circular, or oblong ulcers occupying the place of the destroyed glands, and sometimes two or more of them coalescing. The occurrence of diarrhœa, without the mucous membrane of the intestine undergoing any appreciable alteration, is not unusual; but constipation with an extensively ulcerated intestinal canal must be looked on as very uncommon.

The extensive development of tubercle in the subserous tissue is also worthy of record. This condition appears to me to belong to very rapid progress of the disease, combined with a very low state of the circulating system.

I have frequently seen it when, after the removal of a limb for scrofulous disease of a joint, pulmonary phthisis supervened, and ran a rapid course; this patient's pulse was seldom above 70; the sounds of the heart were always feeble, and he was latterly subject to faintings and profuse perspirations, on making the least exertion.

It has been frequently observed that death often takes place, in advanced cases of phthisis, immediately after partaking of a hearty meal, as was the case in the present instance. The great supply of blood sent to the stomach, and withdrawn from the general circulation, is in general the cause of this phenomenon. In such cases, the heart is usually found to be small, and the left ventricle empty of blood. In the present case, all the cavities of the heart contained coagulated blood; the heart itself appeared very large, but was loaded with fat, and I rather imagine that death took place from the extension to the arteries of the brain of the same fatty degeneration, which was found so extensively in the heart, liver, and omentum.

I have to regret that circumstances prevented the examination of the brain.

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### *March 25th.*

DR. ADAMS IN THE CHAIR.

## *Dislocation of the Cervical Vertebræ.*

DR. HUTTON brought before the notice of the Society, a well-marked example of this rare form of injury, taken from the body of a man about 35 years of age, who, while driving home in a tax-cart, late on Saturday night, in a state of intoxication, was thrown into a ditch, and fell upon his head, his neck being doubled under him. He was immediately carried home, and continued during the night in a state of stupor. Next morning he became quite collected, and was then brought to the Richmond Hospital. We found that he had lost the power of the lower extremities, and of the trunk, as far up as the axillæ; there was also some impairment of motion of the upper extremities; the fingers were flexed, and could not be extended, neither could he extend the fore-arm, but sensation in the arms was unimpaired, although it was affected from the sixth rib, as high as the axillæ. He lay upon his back, and made no complaints, except of pain in the lower part of the neck, whenever he was moved. The bladder was distended; the abdominal muscles being paralysed, the respiration was completely diaphragmatic, and during each act of inspiration, the capacity of the thorax, although enlarged in the vertical direction, was diminished in its transverse diameter, in consequence of the paralysed condition of the intercostal muscles. His pulse remained at 62 throughout, and the temperature of the body was natural; his breathing, however, gradually became more embarrassed, from his inability to expectorate the mucus which was collecting in the bronchial tubes. On Tuesday he began to vomit a dark greenish matter, and died next day.

*Autopsy.*—Upon removing the muscles from the vertebral grooves, a space was observed between the fifth and sixth cervical vertebræ, through which the theca vertebralis could be seen; the superior articular processes of the sixth vertebra were also exposed, the fifth having apparently been drawn upwards and forwards, during the forcible and violent flexion of the neck, at the time of the accident; the intervertebral substance was torn through, but there was no fracture of the body of either vertebra; the right transverse process of the sixth was fractured, but the lesion might have been caused during the removal of the spinal column. The injury was, beyond question, a true luxation or diastasis. The theca and posterior vaginal ligament were uninjured, but a small clot of blood existed between them. The external aspect of the cord was healthy, but at the seat of the injury it felt soft and pulpy, and when a longitudinal section was made of it, a coagulum was found in its centre, and the medullary tissue around it was softened and discoloured for the extent of about two inches.

Before concluding, Dr. Hutton alluded to the points of resemblance which this specimen bore to one exhibited upon a former occasion by Dr. Adams, in which there was a true luxation between the fifth and sixth vertebræ; but there was in addition a fracture of the body of the sixth, whilst, in Dr. Hutton's case, on the contrary, there was true diastasis of the vertebræ, and laceration of the intervertebral substance. In both instances, although the cord appeared healthy when examined externally, yet, on making a section, ramollissement of the medullary structure was discovered, corresponding to the seat of the displacement. Dr. Hutton also briefly noticed some of the cases of this injury, which have been recorded by more recent surgical writers.

### *Strumous Disease of the Brain, with Acute Pericarditis.*

This case is detailed at length by Dr. Lees, in our present Number.

### *Polypus of the Uterus.*

Dr. Beatty exhibited a large uterine polypus, which had been removed by ligature. The patient, who was about forty years of age, was married, but never had a child. She was admitted into the City of Dublin Hospital in February last, in a state of utter exhaustion, from loss of blood; her pulse was weak and fluttering, and her eyelids, feet, and legs were swollen. No examination could be made for a few days, until her strength was a little restored; it was then found that the vagina was filled with a large dense tumour, extremely hard, and resembling very much an inverted uterus; it was so large that it could not be included in a four-bladed speculum, and its neck so thick that the uterus could not be reached. A ligature was passed round it, and tightened daily; the ligature broke on the fifth day, and the instrument came off. Three days afterwards, on proceeding to apply another ligature, Dr. Beatty found that the tumour had come away; the constriction had been sufficient to destroy the vitality of the polypus, though not to cut it through, and the sloughing process continuing after the yielding of the ligature, had caused the separation of the entire tumour. The woman left the hospital perfectly restored to health.

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## SUMMARY.

*On Pulmonary Congestion, considered as an habitual Element in Intermittent Fevers.*—Dr. Woilloz, in two papers published in the *Archives Medicales*, comes to the following conclusions:—1st. At the same period at which the general phenomena of the invasion of febrile intermittents are developed, there occurs a state of pulmonary hyperæmia, which we may term *the pulmonary congestion of ague.* 2nd. This congestion presents three stages, of advance, of complete development, and of decrease, in harmony with these stages of the primary malady; differing thus from the febrile exanthems, in which the pulmonary symptoms diminish as the eruption appears. 3rd. Enlargement of the chest, with diminished resonance; puerile respiration; weakness of the respiratory murmur, with or without sonorous rales; sometimes fine crepitus, and comparative dulness of the posterior part of the lungs; all afford us signs of this engorgement, which is not, in the majority of instances, attended with either cough or dyspnœa. 4th. The existence of sonorous rales are more frequently found to indicate this state of hyperæmia than one of bronchitis. 5th. Measurement alone enables us to recognize the three phases of this congestion and the thoracic enlargement which results from it. 6th. This peculiar condition occurring in ague, the state of congestion produced by chronic pulmonary disease, that caused by a mechanical obstacle to the circulation, and finally that due to certain alterations in the blood itself, embrace all the varieties of hyperæmia of the lungs. 7th. The etiology of the affection is as obscure as that of the other general febrile symptoms of ague. 8th and 9th. Its decrease is a favourable prognostic of the disease, accompanying or announcing its resolution. This decrease is cotemporaneous with those rapid ameliorations which occur during ague: its persistence, on the contrary, indicates the long duration, or the unchecked progress of the primary affection. 10th. This pulmonary hyperæmia, being only an element of the disease, requires to be treated alone when it is the principal symptom of the attack; we can then employ bloodletting and revulsive remedies, especially emetics.

*Galvanic Cautery.*—At the North London Medical Society, Mr. Marshall, after alluding briefly to the nature of the case which first led him to employ the galvanic cautery, viz., that of a young man who suffered from a long and sinuous perforating ulcer of the cheek, which had resisted all attempts previously made to close it—then described the two modes of employing this agent, according as it is employed in the destruction of soft parts, such as hæmorrhoids, vascular growths from the female urethra and nævi, or for the purpose of obtaining contraction in the walls of relaxed passages. *Hæmorrhoids*, when small, and not very vascular, may be easily removed by the heated wire; but when large and vascular, the best mode is to employ the cautery as a surface application, by which the tumour is destroyed over any extent, or to any desirable depth; in this way the liability to hæmorrhage is obviated, and the pain is said to be less severe than that produced by a ligature. Dr. Mackenzie recommends the use of the cautery for removing uterine polypi. *Vascular Tumours of the Urethra:*—Experience has shown Mr. Marshall that these tumours, so painful, so liable to bleed on being interfered with, and so apt to return if not completely eradicated, could be easily, safely, and permanently cured by the electric cautery. This is used, not as an excising agent, as at first tried, but as a surface application, the wire being shaped accordingly, and applied carefully and deliberately to the required extent and depth; pains being taken not to snatch away the heated wire at each application until it had burned itself quite free, or it might pull off the scar, and so cause annoying hæmorrhage. *Nævi:*—These are sometimes so small, or if large so easily dealt with by other methods, that Mr. Marshall does not recommend the electric cautery indiscriminately; in extraordinary positions of nævi, as, for example, when situated in the lip, or in the substance of the nostril or the ear, it is of use. One very good case was mentioned, of a nævus of the ala of the nose, cured with scarcely any deformity, in a child three years old. The electric cautery has also been used by many dentists, for destroying the pulp of decaying teeth. The examples of cases in which this cautery can be advantageously used as a means of closing sinuses or fistulæ are very numerous. In one instance, the remains of an encysted tumour, the interior of which secreted hair and sebaceous matter, was effectually destroyed, after no less than seven previous unsuccessful attempts by extirpation, laying open the cyst, or the application of escharotics. It had been situated on the back of the sacrum and coccyx; and when the patient, a clergyman, was sent to Mr. Marshall, by Sir B. Brodie (who advised the electric cautery to be tried), there were two openings, leading into an irregular cavity, which still, from time to time, gave exit to balls or tufts of hair. By passing in a bundle of fine wires, and opening them apart, by pressing their ends together when lying in the sac, the interior was thoroughly destroyed, and a cure completed. A smilar cyst, on the cheek of a lady, was subsequently cured. Mr. Marshall has shown that fistulæ in ano may also be divided by the incandescent wire, but the simplicity of the operation by the knife renders it unnecessary in ordinary cases. By means of the electric cautery, however, both imperfect and even perfect fistulæ in ano have been made to fill up and unite. In one case of each kind the cure was permanent; in another, of perfect fistula, the track of the wound again opened; while in three the attempt failed. Of urinary fistulæ, Mr. M. has cured one; and has another, once most formidable, now under treatment, with every prospect of cure. In cases of vesico-vaginal fistulæ, it appears superior to any other mode of applying heated wires. Mr. Marshall detailed one case (of which he exhibited sketches) of a most satisfactory nature, in which a large communication between the vagina and bladder, admitting at first three fingers, was finally completely closed by successive applications of the cautery, although the cure was delayed by the occurrence of typhus fever in the patient. He has another case under treatment, which promises to be equally successful. Perseverance is necessary to the cure of these diseases, but no peculiar precautions seem to be needed. The cure alluded to was accomplished without any confinement of the patient, except at the earlier stages of the treatment. Of instances in which the cautery has been employed to aid in the contraction of relaxed passages, the accident of prolapsus uteri, complicated with descent of part of the rectum and bladder also, furnishes the only examples. Four cases have been under Mr. Marshall's care, in neither of which could the patient maintain the parts within the pelvis, even by the aid of the best appliances or pessaries. In three of these the result has been, that the ordinary funnel pessary (made by Mr. Coxeter) is worn with the most perfect comfort, and in one even this instrument is to be now discontinued. The fourth case has not been much relieved.—See *Medical Times and Gazette.*

*Collodion in Inflammation of the Epididymis, &c.*—Dr. Lange, of Kœnigsberg, has, in the second No. of the "Clinque Allemande," quoted by the Gazette Medicale, mentioned that he has cured five successive cases of epididymitis by collodion. In three instances a single application was sufficient, recovery ensuing in the course of three, five, and six days. In one of the remaining cases he used two applications, and in the other, three applications, recovery taking place on the seventeenth and eighteenth days. In the last case, there was also present an orchitis of six months' duration; unfortunately no details are given as to the exact nature of the affections which were so treated. M. Lange also employs collodion in erysipelas, and out of nine cases of this disease, attacking the head and face, and also in fifty-three instances in which it occurred on the lower extremities, he found it to yield, in general rapidly, to a single application; in eight of these cases alone, it seems to have failed in his hands. He occasionally gave emetics to meet the gastric symptoms. In about twelve hours, it is stated, the redness and pain were considerably diminished, and usually disappeared after forty-eight hours, although sometimes tumefaction remained for a longer time. In eczema, collodion failed to afford relief in four out of five cases in which it was tried, but in the fifth case it succeeded remarkably well, recovery ensuing in about five days, after two applications of the remedy.

*On the Treatment of Pneumonia by Digitalis.*—Dr. Heusinger, from the peculiar effects of digitalis on the circulation, was led to use it in the treatment of pneumonia. He employs an infusion (made from fifteen to thirty grains of the digitalis in five or six ounces of water), which is to be taken in doses of a tablespoonful every hour. It is prescribed without any adjunct, and from the very commencement of the disease. He also employs cupping, but only when there is pleuritic stitch present; and if there are signs of gastric irritation, he directs from one-half to one grain of tartar emetic every hour, and continues the treatment until there is a decided amendment, when he replaces it by the infusion of digitalis. He asserts that usually at the end of the first or on the second day, the symptoms which denote the constitutional effects of the digitalis appear, and to these effects, which consist in a perversion of the digestive functions, and a considerable diminution in the frequence of the pulse, is added a marked remission of the symptoms of the disease. He then omits the digitalis, and directs a simple mucilaginous mixture. It is further stated that convalescence is much more rapid than when the disease has been treated antiphlogistically, by repeated blood-lettings.—*Gaz. Medicale.*

*Treatment of Cholera by Muriatic Acid, &c.*—Dr. Caron reports most favourably of the effects of this acid, with bark, calumba, &c., in many cases of cholera. He gives the following formula for the preparation:—Vinous tincture of cinchona, twenty-five parts; tincture of orange peel, three parts; tincture of juniper, three parts; tincture of calumba, three parts; muriatic acid, four parts; mix. He considers its effects to be tonic, anti-spasmodic, and slightly excitant. According to the nature of the case, the intensity of the symptoms, and the patient's susceptibility, he employs it in doses of a small spoonful every quarter of an hour, every half hour, or every hour; in some instances, to favour its tolerance, syrup of tolu or of poppies may be added. The first effect of this medicine is a sensation of warmth in the epigastrium, which speedily extends over the body; the vomiting moderates, and finally ceases; after the fourth or fifth dose, the alvine dejections generally diminish in quantity and frequency; and the secretion of urine is re-established, but more slowly. The indulgence of thirst, by the free use of cold water, Dr. Caron considers productive of most serious consequences; and even in cases which otherwise promised a favourable issue he has seen it prove fatal. He does not advise the acid to supersede the employment of other suitable treatment, as general and local rubefacients, sinapisms, frictions, &c. He further states that, in the hands of M. Malin, muriatic acid, combined with opium, has been found effectual in the treatment of dysentery.—*Gazette des Hopitaux.*

*Influence of Arseniuretted Hydrogen upon the Urine.*—Professor Vogel reports the case of a young man who inspired this gas: amongst other effects, it caused a blackish discoloration of the urine, depending upon the presence of altered blood globules. From experiments with dogs, Professor Vogel states that a similar condition is always caused by inhaling this gas; the urine usually containing albumen at the same time, but the blood globules themselves are seldom recognizable: and he considers that the gas has some special action upon them, probably analogous to that which occurs in several diseased conditions, as in typhus fever, where we have a similar destruction of the globules, with the elimination of pigment by the urine.—*Archiv. des Vereins.*

*On Gelatiniform Cancer.*—Colloid or gelatiniform cancer has, since its first recognition in 1816 by Otto, been the subject of numerous researches, both as to its structure and the position which it should occupy amongst morbid growths of heterologous formation. Rokitansky has especially investigated these subjects, and has succeeded in distinguishing well marked species or varieties, differing from each other both in their appearance and nature. The first form which he describes is that especially termed alveolar cancer, and which is almost exclusively the species described by writers. The second variety is characterized by a considerable development of stroma, which forms thick partitions between the alveolar deposits; these interlace, and thus constitute boundaries for the after portions forming closed spaces (cystoides). The cancerous growth increases by the enlargement of the areolar deposits, or by the development of a fibrous interalveolar substance, and the formation of new enclosed spaces. In the third form, which he describes, a gelatinous substance predominates, having no stroma, or only traces of a fibrous arrangement which is very sparingly developed.—*See "Zeitschr. des Gesellsch der Aerzte zu Wien."*

*Cocculus Indicus in Beer.*—M. Lassaigne has communicated a paper to the *Journal de Chimie Medicale*, upon the detection of this fraudulent adulteration, which there is good reason to suppose is not so uncommonly met with in beer as is generally thought. He states that the picric acid found in cocculus indicus is employed as a partial substitute for hops in beer, and does not admit of being detected merely by its taste; but during his investigation he has discovered that this acid, which communicates to water its peculiar colour and bitterness, on being dissolved in beer, is not precipitated by acetate of lead, whilst both the bitter principle and the colouring matter of hops are almost entirely precipitated by the addition of this salt. He has also found that purified animal charcoal absorbs the colouring matter from beer, but that if picric acid is present, it remains dissolved, without its natural tint being altered, and without uniting with the charcoal; and he proposes to detect the picric acid in beer by either of these plans. If necessary, the beer should be first evaporated, and then by adding the acetate of lead, or by shaking the concentrated fluid with powdered animal charcoal, if it is pure, the fluid will be rendered almost colourless, whilst beer, which is adulterated with picric acid, retains its yellow citron hue.—*Annals of Pharmacy and Practical Chemistry.*

*Congenital Absence of the Iris.*—Professor Boeck, of Christiana, in the *Zeitschr. der Gesell. der Aertze zu Wien*, describes the particulars of a family, the greater number of whom were affected with more or less deficiency of the iris. The first whom he saw, a boy of seventeen years of age, suffered from complete absence of the iris in both eyes; they were otherwise perfect in form; the cornea was transparent, but the eyes were in a continual state of tremulous motion; vision was myopic, although in other repects distinct, and what was remarkable, light did not cause any inconvenience. The father of this boy, aged fifty-two years, also had complete deficiency of both irides; in his right eye an incipient cataract existed, which still permitted some degree of vision, but the cornea of the left eye had become opaque. The sister of this man, aged sixty-two years, was similarly defective, both irides being absent. She had very little vision in her right eye from opacity of the cornea, and also from an incipient cataract; and the lens in the left eye was likewise suffering from cataract, although the cornea was healthy. The niece of the latter, a woman of thirty-seven years of age, was the subject of a similar congenital defect, both corneas were opaque; she, however, enjoyed sufficient powers of vision to distinguish between the various shades of grey colour; but it is stated that she had some difficulty of judging of distances.—*See Gazette Medicale.*

*Effects of Caffeine.*—Dr. Eulenberg has obtained favourable results from the use of caffeine in the treatment of hemicrania in two instances. Both the patients were men between thirty and forty years of age, and enjoying, in other respects, good health. The attack recurred at intervals of from one to four weeks, becoming more and more aggravated until it reached its height, and was occasionally relieved by emetics. Various remedies had been previously used without success. He exhibited two grains of caffeine as soon as the attacks commenced, and repeated this dose thrice at intervals of two hours. It was found to have the effect not only of relieving the pain, but also of lengthening the interval between the attacks.—*Allgemeine Medic. Centr.-Zeitung.*

*Radical Treatment of Hydrocele by the local Application of Lunar Caustic.*—Dr. Parker, of New York, recommends the application of the solid nitrate of silver to the internal surface of the tunica vaginalis. He says that if employed with care and safety, it is less liable than other plans to induce severe inflammation, and is a certain cure. The mode of application is thus described:—"After drawing off the fluid contents of the tumour in the ordinary way, I introduced through the canula a common probe, the end of which was coated, for half an inch or more, with nitrate of silver. This extremity, thus charged with the caustic, was carried lightly over the serous surface of the tunica vaginalis, in various directions, and then removed. The patient complained of some pain during this part of the operation. He was directed to keep quiet for the pain and swelling consequent on the application of the caustic, and apply cooling lotions, should the inflammation be at all severe. He returned home, but as he suffered but little pain, and the swelling was slight, and as his services could not well be spared, he continued about his business without interruption. The pain lasted three or four days, when it ceased altogether, leaving the scrotum of its natural size. In this condition it has since remained, with no symptoms of a return of the hydrocle, the cure having been complete." Three other cases are reported. —*Boston Medical and Surgical Journal.*

*Effects of Cod-liver Oil on the Blood.*—A paper was read at the Royal Society:—"On the Changes produced in the Blood by the Administration of Cod-liver Oil and Cocoa-nut Oil." By Theophilus Thompson, M.D., F.R.S.—The author has found, that during the administration of cod-liver oil to pthisical patients their blood grew richer in red corpuscles, and he refers to a previous observation of Dr. Franz Simon to the same effect. The use of almond-oil and of olive-oil was not followed by any remedial effect; but from cocoa-nut oil results were obtained almost as decided as from the oil of the liver of the cod, and the author believes it may turn out to be a useful substitute. The oil employed was a pure cocoa oleine, obtained by pressure from crude cocoa-nut oil, as expressed in Ceylon and the Malabar coast from the Copperah or dried cocoa-nut kernel, and refined by being treated with an alkali, and then repeatedly washed with distilled water. It burns with a faint blue flame, showing a comparatively small proportion of carbon, and is undrying. The analysis of the blood was conducted by Mr. Dugald Campbell. The whole quantity abstracted having been weighed, the coagulum was drained on bibulous paper for four or five hours, weighed, and divided into two portions. One portion was weighed, and then dried in a water-oven, to determine the water. The other was macerated in cold water until it became colourless, then moderately dried, and digested with ether and alcohol, to remove fat; and, finally, dried completely, and weighed as fibrin. From the respective weights of the fibrin, and the dry clot, that of the corpuscles was calculated. The following were the results observed in seven different individuals affected with phthisis in different stages of advancement:—

| | | Red corpuscles. | Fibrin. |
|---|---|---|---|
| First stage, before the use of cod-liver oil . . | Female | 129.26 | 4.52 |
| | Male | 116.53 | 13.57 |
| First stage, after the use of cod-liver oil . . | Female | 136.47 | 5.00 |
| | Male | 141.53 | 4.70 |
| Third stage, after the use of cod-liver oil . . | Male | 133.74 | 2.23 |
| Third stage, after the use of cocoa-nut oil . . | Male | 139.95 | 2.31 |
| | Male | 144.94 | 4.61 |

*Upon the Pneumonia of the Insane.* By Dr. GAYE.—The author remarks how often in the bodies of the insane circumscribed morbid changes are found in the pulmonary tissue without there having existed during life any indication of diseased action. The difficulties attending physical investigation, and the peculiar course of the pneumonia; the frequent absence of subjective symptoms in such patients, afford some explanation of the fact. According to Calmeil, hepatization of the lung occurs once in every five bodies. According to Thore, the proportion is 1 in 7; according to Lechler, 1 in 9; according to the author, 1 in 6. In 134 autopsies, the author found twenty-two instances of pulmonary hepatization, three instances of extravasation of blood in the tissue, one instance of pulmonary gangrene. In many cases there were present co-existent pleuritic effusions. The histories of the patients present nothing worthy of remark. Of seven cases, five had long suffered from deep-seated cerebral disturbance. The author accounts for the frequency of pneumonia in the insane by a lessening of energy or a paralysis of the filaments of the nervi vagi distributed to the lungs; and he refers to the experiments of Majendie, who proved this connexion by poisoning animals with medicines whose action is especially exerted upon this nerve (ipecac.; tart. stib.; digit.); inflammation of the lungs ensued in each experiment. He brings forward the experiment of Volkman, who proved that division of the nervi vagi produces congestion of blood in the lungs. According to Griesinger, pneumonia occurs especially in those cases of typhus where the patients have long lain in a state of sopor. The author also remarks upon paralytic patients, in whom hepatization of the lung ensues after long sopor. Finally, the excessively rapid exudation indicates that inflammation in these cases arises from paralysis of pulmonary capillaries.—*Damer. Ztschr.*, *x.* 4.

*Inga—A new Astringent.*—This substance enjoys a reputation as an astringent and tonic in some European countries, and also in America. The bark is compact and heavy, and its fracture presents alternate layers of white and red. When chewed it is found to be astringent to the taste, and quickly imparts a red hue to the saliva. It is rich in extractive principles. The alcoholic extract resembles that of rhatany, both in its colour and general properties. In America inga is extolled as an astringent tonic in diarrhœa, in gonorrhœa, in hæmoptysis, in incontinence of urine, and in relaxation of the tissues. As an antiseptic its powder has also been used in the same instances as cinchona. Some trials already made in Paris appear to justify its reputation and its claim to take rank in our *Materia Medica.*

*Method of detecting whether Olive or other Non-Drying Oils have been adulterated with Poppy or other Drying Oils.*—Nitrous acid has the property of converting the oleine or the liquid constituent of almond, olive, and other non-drying oils into a crystalline substance, termed claïdin, while it has not the same action upon the drying oils. Wimmer has accordingly proposed a process to detect whether olive or almond oil has been adulterated with any of the cheap drying oils, founded upon this property. He introduces some iron filings into a flask, provided with a cork, into which is inserted a long bent tube, and then pours some strong nitric acid upon them; a part of the nitric acid will be decomposed, and nitrous acid fumes evolved, which pass off by the bent tube, and are made to pass through a sample of the oil to be examined, placed in a glass with a little water. In performing the experiment the end of the tube must be just in contact with the water upon which the oil is made to float. In a short time the whole of the non-drying oils will solidify into a semi-crystalline mass, while any poppy or other drying oil, if present, will float on the surface. In a similar way the adulteration of drying oils with non-drying ones can of course be detected.—*Month. Jour. of Indust. Progress.*

*Treatment of Xerophthalmia.*—The treatment of xerophthalmia, when fully formed, is merely palliative. If it were recognized in its earliest stage, while the lachrymal ducts were still pervious and the conjunctiva to a considerable extent sound, it is not impossible that its progress might be permanently checked, and the eye restored to comparative health. As I have neither seen nor read of such a case, I can merely suggest the same general line of treatment as has been found useful in other diseases of apparently similar nature......When the conjunctiva has been converted into a dry and unsecreting cuticle, nothing short of its regeneration could effect a cure, and this is beyond the reach of surgery. ......Still, much may be done to relieve the sufferings of the patient, and even in some instances to restore a certain amount of vision. The eye should be defended from dust and other foreign particles by spectacles of plain glass, and entropium or trichiasis when present should be removed by appropriate operations; great care being taken to avoid any unnecessary shortening of the eyelids, which would aggravate the evil, by still further impeding their motions, and exposing the cornea. Further, some substitute must be found to supply the place of the natural secretion, to soften and relax the hardened conjunctiva, and to moisten the dry epithelium of the cornea. Patients sometimes effect this for themselves by applying the saliva at the point of the finger; mucilaginous fluids of various kinds have been recommended, but pure oil has been generally preferred. From its unirritating qualities and power of retaining its moisture, I was induced to make a trial of glycerine, and have found it answer the purpose so effectually, that I can strongly recommend it to the notice of those who may have similar cases under their care. Whatever application be preferred it must be very frequently used, as the small quantity which can be made to adhere to the surface of the eye, especially when the sinuses are gone, very speedily dries......In less advanced cases, where the conical epithelium has not yet undergone the cuticular transformation, its transparency may be so far restored as to allow of a very fair amount of vision so long as the remedy is persevered in.—*Dr. Taylor, Edin. Med. and Surg. Journal.*

*Hypertrophy of the Submucous Tissue and Cancer of the Stomach.*—In certain morbid conditions, the submucous tissue in this region is found as a hard, dense, somewhat transparent-looking layer, varying in different cases from the eighth or tenth of an inch to an inch, or even more, in thickness, and almost of a cartilaginous consistence. Thin sections may be very readily examined by the microscope, but nothing more of the original elements of the tissue, with granular matter and a few badly-defined cells, can usually be made out.

In certain cases, however, the meshes or areola of the tissue are much enlarged, and filled with cells having the general aspect of cancer cells, while the fibres composing the walls of these spaces are found to be more numerous, and of increased thickness. After a time these morbid changes involve the mucous membrane itself, and an irregular ulcerating surface is formed. Such is a general description of a common form of the disease known under the name of cancer of the stomach. In examining an ulcer of this description, a little of the secretion on the surface, the surface itself, and the hardened tissue beneath, should be separately subjected to examination.

In the majority of cases of the so-called "cancer of the stomach," nothing more than the thickening of the submucous areolar tissue above referred to can be observed, and upon microscopical examination none of the cells characteristic of malignant growth can be detected. A similar condition is not unfrequently found affecting the submucous tissue of the colon, cœcum, and other situations. It is important to distinguish this affection from cancer, as in its general appearance to the naked eye it is found so closely to resemble scirrhus, although it is essentially different from this disease in a pathological point of view. In the examination of these structures by the aid of the microscope, thin sections entirely through the thickened mass should be obtained with the aid of a Valentin's knife. The section, after being slightly washed, may be subjected to examination with the usual precautions.—*The Microscope, and its Application to Clinical Medicine.* By Dr. Beale.

*Preparation of a Double Salt containing Protoxide of Iron.*—The Austrian Pharmaceutical Journal contains an anonymous paper on this subject, in which it is stated, that the white carbonate of iron, precipitated from a solution of protochloride of iron re-dissolved by the addition of dilute nitric acid, gives a colourless liquid, which may be kept without oxidation, even in an open flask, and when evaporated, yields a nearly colourless double salt, which deliquesces in a moist atmosphere, but is not oxidized. On account of the hygroscopic character of this salt, the author recommends that the solution should be used for medicinal purposes, and prepared as follows:—Clean iron wire is dissolved in an ounce of hydrochloric acid of 1.110 sp. gr., the green solution treated with enough carbonate of soda to precipitate all the iron, and dilute nitric acid added, until the precipitate is re-dissolved. This liquid is diluted with distilled water, until the total weight is six ounces; one ounce, therefore, contains 12.5 grains of iron. A solution of proto-sulphate of iron precipitated by carbonate of soda, and the precipitate re-dissolved in dilute sulphuric acid, likewise gives an almost colourless liquid, which yields, on evaporation, crystals that are not oxidized by exposure to air. He considers that this salt might be advantageously substituted for sulphate of iron in medicine. It is probable that the first-mentioned compound contains proto-nitrate of iron, which has been observed by Berzelius to possess a certain degree of stability.—*Pharm. Journ.*

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## STEEVENS' HOSPITAL.

### *Cases of Injury of the Spine.*

BY SAMUEL G. WILMOT,

SURGEON TO THE HOSPITAL.

### *Case of Fracture of the articulating and transverse Processes of the third and fourth Cervical Vertebræ, on the left Side, with Rupture of the intervertebral Ligament between the fourth and fifth; complete Paralysis of upper and lower Extremities; Death in forty-eight Hours.*

**Patrick Christian**, æt. 22, a labourer, was admitted into Steevens' Hospital on the 5th of last February.

He stated that on the previous evening he was precipitated on his head and neck from a cart, in which he was standing upright. He was stunned for a few minutes; but, upon regaining consciousness, he found a total loss of motor power and sensation in both upper and lower extremities.

On admission, there was complete paralysis of motion and sensation of the upper and lower limbs. Respiration was observed to be entirely diaphragmatic; the intercostal muscles remaining quite motionless during the respiratory act. The bladder had not been evacuated since the injury, and it was distended as high as the umbilicus; there was, also, inability to discharge the fæces; there was no difficulty in swallowing; pulse 80; temperature of body normal. He complained of pain whenever his neck was stirred, and particularly when pressure was made over the situation of the fourth and fifth vertebræ; at this spot a good deal of blood had been extravasated, and a slight inequality in the mesial line was perceptible; but no idea of the extent or nature of the lesion, revealed after death, could be elicited by manual examination.

Large vesications were observed on the palms of the hands and soles of the feet, occasioned by the injudicious application of hot bricks immediately after the accident. A catheter was introduced, and three pints of high-coloured and slightly ammoniacal urine were drawn off.

Ordered to be cupped over the seat of injury, and to be placed on diaphoretic mixture.

Catheter to be introduced three times daily.

6th.—Respiration has become very hurried, and a mucous rale is audible over the entire chest; he states that his chief distress consists in inability to expectorate, which is obviously caused by paralysis of the expiratory muscles. From this period the dyspnœa increased, effusion rapidly taking place into the air-cells and tubes of the lungs, and he died in exactly forty-eight hours from the date of the injury.

*Autopsy.*—On making an incision in the mesial line, over the spinous processes of the cervical vertebræ, all the tissues were found infiltrated with blood. The entire row of the cervical vertebræ were then carefully removed and examined, when the following lesion was discovered:—fracture of the left transverse process of the fourth vertebra, and fracture of the inferior articulating process of the third vertebra on same side: the intervertebral ligament between the fourth and fifth vertebræ was torn nearly completely through. The spinous processes and laminæ were next removed. Blood was found outside and within the theca; the cord was softened, and in its centre, corresponding with about the fourth vertebra, lay an oval clot of blood, measuring about a quarter of an inch in its longest diameter.

*Observations.*—The foregoing case is one of many which demonstrate the inutility of any operative procedure in fractures of the spine. The idea of performing in these cases an operation similar to what we adopt so frequently in the analogous instance of depressed fracture of the skull is specious enough; but the evidence furnished by post mortem investigation clearly proves, that the elevation of the bone, even could that be effected with little injury, can remedy but part of the evil. The mischief is seldom, if ever, confined to the bones; lesion of the cord itself, softening, extravasation of blood outside and in its substance, will be found to coexist. Again, an operation is only feasible when the bone is absolutely depressed, making pressure upon the cord; and how are we to know the exact nature of the fracture in most instances? If the fracture be not depressed, or if depressed, not implicating the cord (which may readily be the case), then any operation, such as has been proposed by Mr. Cline, must be worse than useless, and would doubtless remove in most instances whatever chance of recovery may have existed. The next case but one shows how there may be regular apoplexy of the cord as the result of injury, without any fracture; and the last one exemplifies how recovery may take place from injuries of the spine, producing paralysis. Now, suppose the operation alluded to were performed in either of those cases, what would be the result? Still, there are many such cases. Analogy, too, weakens the claims of the operation proposed in fracture of the spine; how rarely is the operation of trephining successful in depressed fracture of the cranium, owing to the mischief done not being confined to the bone, but implicating the parts within! In the present case, though there was fracture of the processes of two vertebræ, and rupture of the intervertebral ligament, no part could have been depressed, since the laceration of the ligament was not complete; the compression of the cord must have been solely caused by the blood extravasated in its substance and around it; and, even if the laceration of the intervertebral ligament were complete, so that depression of a vertebra might take place, it is impossible that any operation could remove the compressing cause.

### *Case of Paralysis of upper and lower Extremities, from Injury of the Cervical Portion of the Spinal Cord; Death in fifty Hours.*

— Butler, æt. 40, was admitted into Steevens' Hospital, having, while in a state of intoxication, fallen on his back from a height of twenty-one feet. As soon as the effects of the intoxication passed off, it was found that the upper and lower limbs were paralysed in respect both of motion and sensation.

He complained of pain in the neck, which was increased by pressure over the fourth cervical vertebra, where there was extravasated blood, and apparently a depression. The respiration was slow and abdominal; pulse 40, and feeble; temperature of body normal. There was retention of urine.

Ordered carbonate of ammonia mixture. On the following day priapism was observable. The loss of sensibility also had extended; he evinced no perception when pinched on the abdomen and even on the chest the feeling was greatly blunted. He complained of dysphagia, he could make no attempt at swallowing solids, but fluid he was able to let down with some difficulty.

The lungs now rapidly became congested effusion took place into the air-cells; and he gradually sank, death taking place in fifty hours from the receipt of the injury.

It is to be regretted that no post mortem examination could be procured in this case. The slow pulse, the rapid congestion of the lung, the dysphagia, and the priapism indicate extensive (and perhaps some peculiar) lesion of the spinal cord, high up in the cervical region.

### *Case of complete Paralysis of the upper Extremities, partial of the lower, from Injury of the Cervical Portion of the Spine; Death from accidental Erysipelas; Abscess in Centre of Cord; no Fracture discoverable.*

P. Ryan, æt. 50, was admitted into Steevens' Hospital, and gave the following history of his case:—

Four days previously to admission he fell off a high load of hay, on his back, and immediately found that he had lost voluntary motor power and sensation completely in the upper extremities, but only partially in the lower.

On admission he could not stir either arm, and when they were firmly pinched he evinced no perception. He could slightly move the lower limbs, which manifested faint sensibility in some parts. Sometimes, when any sudden impression was made upon the upper extremities, remarkable reflex movements were exhibited; the lower did not manifest similar phenomena.

The patient had control over the bladder but there was incontinence of fæces from paralysis of the sphincter ani. The respiration was normal. On examination there was found tenderness on pressure over the spinous processes of the fifth and sixth cervical vertebræ, but there was no apparent displacement. The patient kept his head turned slightly towards the right shoulder, which position he seemed unable to alter by his own effort.

Leeches to be applied to the seat of injury, and to be placed on mercury. The mercurial treatment was continued for about three weeks, when a decided improvement was observable just as his gums became affected.

Sensibility in great measure returned to the parts in which it had been absent; he could also raise the left arm to his head, and flex the fingers; with the right arm, however, he had as yet gained not so much power. Perfect control over the alvine evacuations had also been restored.

Electricity was now employed, under which the sensibility and motor power of both upper extremities had become further reinstated, when an attack of erysipelas, caused by the application of a blister over the seat of the injury, supervened, and proved fatal.

*Autopsy.*—No traces of fracture nor dislocation of any of the vertebræ could be discovered. On cutting, however, through the cord in a longitudinal direction, a small abscess was found exactly in its centre, and at a spot corresponding probably with the fifth cervical vertebra. The fluid it contained was thin and small in amount, and the parietes of the little cavity were quite irregular.

*Observations.*—Two interesting questions are suggested in this case:—was the cavity found in the cord, a mere abscess, the result of inflammation; or was there originally an apoplectic clot, which became absorbed, leaving a cell as in apoplexy of the brain?

The history of the case renders the latter supposition the probable one; the supervention of paralysis immediately upon the receipt of the injury, indicates clearly compression of the cord, and since there was no fracture the compressing cause could alone have been blood. The blood being extravasated in the centre of the cord where it necessarily involved the excito-motory apparatus, readily accounts for the interesting reflex phenomena observed in the early stage of the case. The same case bears out in a marked manner what has been already observed regarding operative interference in injury of the spine. Here was extensive paralysis, the result of injury without any *fracture or dislocation.*

### *Case of Paralysis of the lower Extremities from Injury of the dorsal Portion of the Spine; Recovery.*

Brian Sheppard, æt. 35, was admitted into No. 1 Ward, on the 31st of September, 1850, having a short time previously fallen on his back from a considerable height.

Both lower extremities were perfectly deprived of voluntary motion and sensation, but the upper were unimpaired; there was also complete paralysis of the bladder and rectum.

On examining the spine, a small ecchymosis was found over the situation of the last dorsal vertebra; here, also, some irregularity could be perceived, and, upon making firm pressure, pain was produced.

Ordered to be cupped over the seat of injury.

23rd.—Has had a good deal of fever, and complains of severe pain at the injured spot whenever he is stirred. There has been no tendency to priapism. The bladder is evacuated by means of a catheter, four times daily; the urine is clear, and inoffensive to the smell, being slightly acid.

Ordered to be again cupped, and to have an oil draught, as the bowels have been unrelieved; to be then placed on mercury.

October 1st.—Scattered bronchial rales are audible over the entire chest. He complains of a tingling and burning sensation in the paralysed limbs. The bladder is still unable to act, and the urine has become of a brown colour, muddy and ammoniacal, and there is some mucous deposit through it. The bowels are never relieved except with the aid of purgatives, and then the stools are passed involuntarily.

10th.—Sensibility has slightly returned in the lower limbs, but the power of motion is still absent. The retention of urine has been replaced by incontinence.

November 1st.—He has been kept slightly under the influence of mercury since last report, and a great improvement is now manifested. Sensibility is in great measure re-established in the lower extremities, and he is gradually regaining motor power; the bladder too is acquiring tone. The bronchitis has disappeared. From this period the patient's condition underwent a marked though slow advance to recovery. Sensibility and voluntary motion, as well as the power of the bladder and rectum, were, after a few weeks, nearly completely restored, and he left hospital three months from the date of his admission.

During the course of this protracted case, no tendency to sloughing of the integuments, except over the sacrum to a limited extent, was manifested at any period.

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## WHITWORTH AND HARDWICKE HOSPITALS.

### *Case of Chlorosis, with depraved Appetite.*

BY J. T. BANKS, M.D.,
KING'S PROFESSOR OF PHYSIC.

M. B., æt. 24, admitted into the Whitworth Hospital on the 10th of last March, an only child of parents who had been very delicate, and finally died of phthisis; the mother at the age of 24, and the father at 30. She is red-haired, and her skin peculiarly delicate and transparent; in all respects she appears to be of a highly strumous diathesis.

Menstruation was first established in her 18th year. The catamenia were never regular, but for the last eight months the uterine function has been completely suspended. According to her statement she had been in tolerably good health from childhood up to her fourteenth year. For some months before her admission into hospital she had been suffering from severe and almost constant headach, nausea, with palpitations and shortness of breathing on the least exertion; there was also irregular distribution of heat, the lower extremities being extremely cold, while the temperature of head was inordinately elevated.

In her fifteenth year this young woman was employed, during the period of famine, in a store, in which Indian meal was sold, when she acquired the habit of eating largely of this food in its raw state. Subsequently she found herself irresistibly impelled to eat uncooked vegetables of all kinds, cabbage, potatoes, turnips, &c., &c. About four months before admission into hospital she commenced to eat starch in large quantities, and her longing for this substance far exceeded that she had experienced for the vegetables. When she could not get it in the house, she purchased it; and if at any time she could not obtain it, she "suffered penance," and "felt as if her heart was being dragged out of her chest." The desire for vegetables did not cease altogether, but it was only for starch that she had an unconquerable propensity, against which she struggled hard, but no mental effort or resolution could in the least prevail.

When received into the hospital she presented the group of symptoms which constitutes chlorosis. In addition to the well-known external signs of the disease, a murmur taking the place of the first sound of the heart was audible at the base of the heart, and was propagated into the arteries. In the neck the *bruit de diable* was constantly present. Under the ferruginous treatment, combined with the liberal administration of cod liver oil, the ordinary symptoms of chlorosis were completely removed, but the morbid appetite, though by no means so imperious as formerly, still remained, and after leaving the hospital she informed me that she frequently ate a pound of starch at night, when she could not be observed.

She was directed by me to indulge her propensity for raw vegetables to a moderate extent.

Derangements of the digestive functions are frequently, but by no means constantly observed in chlorosis.

In some rare cases, the most marked and morbid states of this function are manifested; such, for example, as pica, malacia, chthonophagia, &c., &c.

A long list might be made out of the substances which have been ardently "longed" for and voraciously devoured by the chlorotic and hysterical; even excrement, according to the testimony of that close and accurate observer Hoffman, may be added.

The impulsive desire for strange and non-alimentary substances, by those affected with the "green sickness," has not escaped the notice of the older English dramatists.

To the psychological physician, cases of morbid and depraved appetite are familiar.

The records of medicine and the experience of those conversant with mental alienation, in all its varied phases, supply numerous examples of disease in which an inveterate propensity for some substance, and often of a disgusting nature, formed the most prominent feature of the mental malady.

In the case of chlorosis, and perhaps, also, sometimes in insanity, the depraved appetite depends upon an altered state of the circulating fluid.

That the blood is profoundly altered in the former, we know from the results of the most minute and carefully conducted researches. Attention should be directed to this craving, and when it is not for any noxious or non-alimentary material, the indulgence of it may be followed by a favourable change in the condition of the patient.

The importance of attending to this in mental disease, is illustrated by the writer of an eloquent and able paper "On some of the latent Causes of Insanity," in the *Psychological Journal* for last April.

"A man was destructively maniacal, partly against persons, but only from sudden bursts of irritation, principally against things, so that not a chair or window escaped his violence. He broke 200 panes of glass in a very short time. What was remarkable was, that he ate ravenously of his food all the time; but, however well fed, he would not let a blade of grass, or a weed, or green thing grow in the airing court in which he walked. If his hands were restrained, he knelt down and tore up the weeds with his teeth. Noting this instinctive appetite, we directed that he should be supplied with uncooked carrots, celery, &c., *ad libitum*, believing that it was an indication of a morbid condition of the blood, probably an exciting cause of this maniacal state. The result justified our deduction; and as hopeless a case as it has been our lot to witness was perfectly restored to health and sanity."

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## HARDWICKE FEVER HOSPITAL.

### *Lectures on the Different Complications of Fever.*

BY DR. GORDON,

PHYSICIAN TO THE HOSPITAL.

### LECTURE I.—*Jaundice.*

During the past spring a great number of applicants have been refused admission into the Hardwicke Fever Hospital for want of accommodation, and the fever has been of a very low

; in many instances it was attended by
lications which were also of a more or less
ssing nature. I shall first endeavour to
ibe what these complications were, and
make some remarks on the nature of the
itself.

all the complications of fever which we
o treat, jaundice was, perhaps, the most
ing. It sometimes occurred at the com-
ment of the fever, and proceeded *pari passu*
it; while in other cases the fever was of
l days' duration before the discoloration
skin appeared.

m time to time cases have occurred in the
wicke Hospital, so similar to those described
sh and Louis as *yellow fever*, that there
be no doubt of their being the same dis-
Such cases, however, were invariably
lic; they were characterized by universal
ice, with extensive lividity of the surface,
vomiting, hæmorrhages from the different
s surfaces, and occasionally incipient gan-
of the nose, or of some one or more of
tremities. Within the last three months
ave had none exactly of so severe a cha-
, but the following case is sufficiently
to show the alarming nature of this com-
ion.

*Case reported by* MR. ABBOTT.

es Mahon, aged 18, was admitted into the
wicke Hospital May 22nd, with the ordi-
ymptoms of simple fever. He had been
ays ill, complaining principally of rigors,
ch, and palpitation. He was a clerk in
ice, and had been generally very delicate.
re was at first little worthy of observation
case. For three days his pulse remained
; his skin was moderately cool; the bowels
regularly; his tongue was white; thirst
ate. His only complaint was slight head-

the 25th he was observed to be jaundiced;
olour was of an orange-yellow; he lay
s back and appeared greatly prostrated.
ulse was 76; he had some dark-coloured
s vomiting; bowels not moved; urine high-
ed and scanty. He was ordered a strong
rial purgative, followed by the usual black
ht.

h.—The bowels have been copiously moved
ut any amelioration of the symptoms. He
rs more stupid; is very unwilling to an-
questions or be disturbed; extremities
r cold; pulse 60, weak; tongue dry and
; no vomiting, but tenderness on pressure
gastrium, none over hypochondriac regions;
nen tympanitic; the dejecta were untinged
bile; the surface of the body is more deeply
liced; respiration natural.
blister was applied to the back of the head,
rial ointment was sedulously rubbed in, and the blistered surface was dressed with it; a turpentine enema was administered, and he was ordered a drachm of the oil of turpentine every third hour.

27th.—Became greatly excited during the night, screaming frequently, and endeavouring to leave the bed. The tendency to coma has now returned. Pulse 66, not so weak; he is perspiring freely; urine very high-coloured, but secreted more freely; bowels free; evacuations clay-coloured; extremities warm; abdomen less tympanitic.

Appl. vesicatorium capiti toto.

Continuantur ungt. hydrarg. et cetera medicamenta.

28th.—He is decidedly mercurialized, but does not seem in any respect improved. He is more deeply jaundiced, and the coma is more profound. Pulse 48; report in other respects as yesterday.

In the evening his respiration suddenly became very rapid and laborious; perspiration became most profuse; extremities cold; and he died in a few hours.

*Post mortem Examination.*—All the viscera were tinged of a deep yellow colour; the surface of the brain was rather dry; the fluid in the arachnoid sac was rather less than usual. The vessels of the pia mater were minutely injected. Both pleuræ were extensively covered with small purpuric spots; the left lung presented a perfect example of true pulmonary apoplexy; the hæmorrhage was very extensive; almost the entire of the lung was engaged, the apex and a small portion of the anterior part alone escaping, but only to show more accurately the defined margin of the diseased part; the parenchymatous structure of the lung was completely broken down, and, in the words of Andral, "the greater portion of the lung was reduced to a soft fluctuating mass, in which there could only be distinguished some debris of pulmonary parenchyma and a quantity of effused blood, partly coagulated and partly fluid."

The liver presented a more decidedly yellow colour than any of the other viscera; it was softer than natural, and broke down under the knife; some portions were much darker than others. In those parts all outline of lobules was effaced. The gall-bladder was pale and contracted, and contained only about a dessert spoonful of very thick, black, ropy bile, which, on pressure, flowed into the duodenum. The spleen was natural.

The gastro-intestinal mucous membrane presented throughout patches of slight vascularity. The colon contained several grey indurated masses, similar to what are frequently found in the fæces of jaundiced patients. (*Museum, Richmond Hospital.*)

It was evident from the commencement that the jaundice in the above case was caused by suppressed secretion of bile; that it did not arise from mechanical obstruction to its passage out of the gall-bladder, was evident from the fact of bile appearing in the matter first vomited, and from the absence of any tumour in the region of the gall-bladder.

Pathology is as yet unable to throw much light upon the true nature of such cases. We are able to see the retained colouring matter of the bile diffusing itself through all the tissues, but what becomes of the essential constituent bilin we know not.

From the great rapidity and generally fatal character of this affection, it might naturally be looked on as the result of some poison absorbed or introduced into the system. Dr. Budd says that he has seen rapid destruction of the cells of the liver, such as existed in the present instance, and considers that in consequence of decomposition of the retained principles of the bile, or of the broken-up hepatic cells, some peculiarly noxious agent is evolved, which is the real cause of the malignant symptoms; this condition, he adds, may be brought about by powerful and depressing emotions; but is far more frequently produced by some poison introduced from without or engendered in the body by faulty digestion or assimilation.

The immediate cause of death in this disease varies very considerably; perhaps the most usual is delirium, ending in coma. Such is the way in which most fatal cases of jaundice, whatever be their origin, terminate. Another frequent cause of death is hæmorrhage from the gastric or the intestinal mucous membrane; some cases die from gradual exhaustion, without the occurrence of hæmorrhage, or without any cerebral affection; and some die, as in the case before us, from pulmonary hæmorrhage—this hæmorrhage is generally limited, as in the present instance, to the substance of the lung, or the appearance of small purpuric spots beneath the serous membrane, but sometimes the pleura gives way, and the blood is poured out into the pleural cavity; to such lesions death is almost immediate, the sudden collapse and dyspnœa are the only symptoms afforded; there is sometimes acute momentary pain complained of, but there is seldom, if ever, either cough or hæmoptysis.

From the treatment of this case we derive, at least, negative information.

Authors do not as yet seem agreed as to whether the mercurial treatment is useful, or the contrary, in this affection. Wood* says, "Experience would seem to pronounce in its favour, for it is admitted on all hands that patients almost always recover if salivation can be effected in the early stage."

Marsh† observed, that mercury may be pushed to salivation, and yet the jaundice will still remain.

Budd never alludes to the mercurial treatment in this affection.

In torpidity of the liver, mercury has usually been found of the greatest advantage; but from the great rapidity of such cases as Mahon's, and from the great irritability of the gastro-intestinal mucous membrane, which usually exists, it is generally impossible to bring the system fully under the influence of mercury. Mahon was, however, most fully salivated, and rather early in the disease, but without any relief; it neither caused secretion of bile, nor any amelioration of the head symptoms.

He was also ordered oil of turpentine, in drachm doses, every three hours.

Turpentine has long been used in purpura hæmorrhagica, and cases where the blood seems to become more diffluent than natural. Its efficacy in yellow fever has latterly been well shown by Dr. Laird,‡ who has compiled his report from his own experience, and from the records of the naval hospital at Bermuda, where this disease is so frequently epidemic. He considers the pathology of yellow fever as primarily connected with a morbid alteration of the blood, and that the turpentine, besides its general properties as a sedative, styptic and antiseptic, possesses also peculiar power of action on the skin and kidneys. I can bear ample testimony to its success in another form of jaundice, which we meet with much more frequently in fever, and arising from a totally distinct cause, I allude to jaundice from excessive secretion of bile. In the year 1845, Dr. Corrigan treated, with turpentine, a case of this kind ("considerable discharges of blood, mixed with bile, from the intestines") which occurred in the Hardwicke Hospital, and which recovered, even after the brain began to be affected.§ I have had in my wards several cases of this kind within the last three months, all of which recovered under the use of turpentine. The usual dose ordered is a drachm every two or three hours. In the case just alluded to, Dr. Corrigan ordered half an ounce every fourth hour, and has since advised it in doses of from one to two drachms three times a day.‖ It is frequently given with nitrous spirit of æther, to promote perspiration and avoid strangury. The following case, out of several, will answer as an example of this form of jaundice.

### *Case reported by* MR. ABBOTT.

John Colgan was admitted into the Hardwicke Hospital, January 11th, complaining of rigors, headach, and pain in his back. He was four days ill; he was universally jaundiced. Tongue broad, white, and dry; great thirst; abdomen swollen and tympanitic; great nausea; bowels free; no tenderness, except in left hypochondriac region, where the spleen can be felt much enlarged. Pulse 100, weak.

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* *Vide* "Practice of Medicine," vol. i. Philadelphia, 1852.

† "Dublin Hospital Reports," 1822.

‡ *Vide* "Lancet." 1853. Vol. ii. p. 182.

§ DUBLIN HOSPITAL GAZETTE, First Series, vol. i. p. 70.

‖ "On the Nature and Treatment of Fever." Dublin, 1853, p. 90.

Ol. terebinth. ʒi. 2dis horis ex aquæ cyatho.

12th.—Nausea continues, with vomiting of dark bilious matter; alvine discharges copious, fluid, well tinged with bile; urine also loaded with bile; skin burning hot. Pulse 84, weak.

Cont. ol. terebinth.

14th.—Pulse 90; tongue moist; perspiring slightly; no vomiting; nausea much diminished; splenic enlargement less; jaundice diminishing.

Recovered slowly; convalescent Jan. 30th; discharged cured Feb. 14th.

In this form it would appear that there was an excess, rather than a suppression, of the secretion of bile; as in the former all the tissues are tinged of a yellow colour, seldom, however, so deeply or so bright; the conjunctiva is less injected, and the face is not so congested, nor the appearance of prostration so great. If there be vomiting, there is usually copious discharge of bile, and the alvine evacuations are also well coloured therewith. There is frequently bilious diarrhœa. These cases are with us generally epidemic, while the former class are sporadic. About two years ago there were a great many of them, and several proved fatal. The post mortem appearances which we found were constant, and differed remarkably from those found in such cases as Mahon's. The surface of the body was yellow, and had frequently spots of purpura hæmorrhagica diffused over it. The spleen was invariably greatly enlarged and very soft, in many cases almost diffluent, and could with difficulty be removed entire from the body. The liver was generally enlarged; it was in some cases friable, and more yellow than natural; the gall-bladder was always full of dark bile, which flowed freely into the intestine; the mucous membrane of the stomach was generally congested, as were also the depending portions of the lungs.

This form of jaundice I have occasionally treated with sulphate of quinine, but without any good effect. Occasionally the stomach is so irritable that the oil of turpentine is rejected; this, however, seldom continues, and can in general be obviated by the application of a blister to the epigastrium. When the stomach continues to reject the officinal preparation, I have seen the ætherceal oil tolerated, and in this disease prove equally efficacious.

There is a third form of jaundice occasionally met with in fever, and which it is of great practical importance to be acquainted with. A patient in continued fever, without any appearance of jaundice or hepatic symptoms on the previous day, suddenly becomes quite yellow about the fourteenth or fifteenth day of fever, and all the tissues become impregnated with bile; besides giving the usual tint to the skin and conjunctiva, the bile passes off by the bowels most copiously, and the urine is loaded with it. In one case I observed that the posterior part of the dorsum of the tongue, the soft palate, and fauces, had assumed the yellow hue, and that not merely the saliva but the expectoration was deeply tinged with it.

These cases are purely critical, and differ from other forms of crisis only in the organ in which the critical action takes place. Instead of occurring in any of the usual modes, such as perspiration or diarrhœa, &c., it occurs by a profuse secretion of bile, which endeavours to pass rapidly away through all the outlets of the body. Such cases require but little treatment; the rapidity with which all the icteric symptoms pass off is most surprising. There are two facts, however, to be noticed regarding it; one is, that the premonitory symptoms of this form of crisis are more severe than I have ever seen in any other; they were well marked in the case of Ellen Smith, æt. 26, admitted into the Hardwicke Hospital June 6th, 1853. She was, in the course of fever, suddenly seized with bright flushing of the face, delirium, and increased rapidity of the pulse. This was followed by universal jaundice and excessive discharges of bile per anum and in the urine. From this she as rapidly recovered, but again afforded an example of the other important feature in this mode of crisis, which is, the excessive debility which follows it. Although she was well supported and properly nursed, she suffered a premature confinement, and was very long in regaining her natural strength.

I have also very frequently seen jaundice arise in the course of fever, as a symptom of pneumonia; to this form I shall allude when detailing the pulmonary complications of fever.

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## PATHOLOGICAL SOCIETY MEETINGS.

*April 1st*, 1854.

Sir H. MARSH, in the Chair.

### *Degeneration of Muscular Tissue of Heart; Latency of Disease.*

Dr. Thomas Brady exhibited the preparation.

Death had occurred in this case suddenly and unexpectedly. The patient was a prisoner, and had been four years in confinement. During that period he had never sought medical aid; and his brother, who was confined in the same prison, had never known him complain of his health. On the day of his death his messmates had remarked that he seemed to enjoy his dinner, and he observed himself that he had a very good appetite. About half-an-hour after dinner, the conversation happening to turn upon some of their fellow-prisoners whose sentence had been commuted, and who were to be discharged the following morning, he became visibly affected, rose up from the table, and exclaiming they were fortunate fellows, walked over to the window, and leaning with his head resting on his hand, as if to shade his face, appeared about to burst into tears, when, on a sudden, he fell heavily on the floor, perfectly insensible. His companions crying out for aid, which was just at hand, ran to assist him, when, consciousness returning, he said he would be well in a moment, but immediately relapsed into a state of insensibility, his breathing becoming rapid and rattling, and he was dead in a few minutes.

A complete examination was made of the body, to determine with precision the cause of death, but no trace of disease was detected, except in the heart. He was only twenty-four years of age, middle size, well formed, and of tolerable muscular development.

The brain and lungs were perfectly healthy, but both had a somewhat bloodless aspect, and certainly contained less blood than might have been expected in a man in the prime of life, forming, in this respect, a strong contrast with some of the abdominal viscera. The stomach, which contained the food he had so recently eaten, exhibited, in a striking manner, the bright pseudo-inflammatory injection of its mucous membrane, which accompanies the process of digestion; the mucous membrane of the duodenum and superior portion of the small intestines presented a somewhat similar appearance; the liver was much congested, and the kidneys contained more blood than usual. The vessels at the right side of the heart, and the ventricles of the heart itself, were largely distended with fluid blood.

The heart is seen to be much increased in size; this arises entirely from dilated hypertrophy of the left ventricle, the walls of which are nine-tenths of an inch in thickness. The right ventricle, on the contrary, is diminished in capacity, being encroached on by the hypertrophied septum, which projects into it in an arched form.

The columnæ carneæ of the mitral valve are seen to be enormously enlarged, and converted into a dense, firm, white substance, perfectly smooth on the surface. On cutting into this, no trace of muscular fibre is to be seen; the substance that has replaced it presenting, in some places, the appearance of granular masses, with small scattered depots of purulent-looking matter, and, in others, assuming somewhat of a fibroid aspect. The whole of the apex of the heart, with the exception of a thin layer of muscular tissue on its exterior, has undergone a precisely similar degeneration. The muscular structure of the rest of the heart is perfectly healthy, the valves natural, and the endocardium presents no trace of disease.

This degeneration of muscular tissue being obviously of a very unusual and doubtful character, it was thought desirable to have it submitted to microscopic examination before exhibiting it to the Society, and Dr. Lyons having kindly taken the trouble of examining it, his report is subjoined. It will be seen that the result is valuable as a negative diagnosis against pus, tubercle, cancer, or other definite products.

"The carneæ columnæ were enormously hypertrophied, and appeared to be infiltrated with a fibrinous exudation, in some parts occupying the interspaces between the fibrillæ, in others aggregated into globular masses from one to three or four lines in diameter, most of which had a pretty fine consistence, but a few near the apex were softened.

"Under the microscope, this infiltrated matter was found to present the elements of an unorganized structure, abundance of granules, small granular cells, irregular small granular masses, imperfectly formed fibres, but no perfect cells, or other histological elements of definite shape. In no instance had the infiltration passed to the condition of pus."

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## *April 8th.*

MR. ADAMS, IN THE CHAIR.

### *Pulmonic Emphysema, with Cardiac Disease.*

DR. BANKS exhibited a specimen taken from a patient, aged 27 years, who was admitted into the Harkwicke Fever Hospital on the 25th of last month, and at that time presented the appearance of slight fever. On the third day his respiration became exceedingly hurried. On examining the chest, dry bronchitic rales were heard over its whole extent, respiration became greatly oppressed, so that on the third day he was unable to lie down, and his face became livid, with an expression of great distress; the most minute examination failed to detect any abnormal dulness. The pulse became extremely rapid, and the respirations more than proportionally increased; over a considerable portion of the chest, moist rales took the place of the dry. Evidently in the smaller tubes the breathing became more and more difficult, and on the 5th of this month he died. The symptoms closely resembled those of capillary bronchitis. It should be said, that occasionally, during the course of the disease, he had expectorated mucus tinged with blood. On examining the body, the lungs presented a most beautiful appearance, resembling somewhat the skin of a leopard. They were emphysematous, and did not collapse when opened; and immediately over the heart there was a portion of lung completely solid, and also similar masses in various other parts of the lungs.

On examining the trachea and bronchial tubes, signs of inflammation were observable, becoming more intense in the smaller bronchial tubes, and in the minute ramifications a thick, white, glairy fluid was found filling them, which, on making a section of the lung, could be easily pressed out. The heart presented an appearance rather unusual; there is a cribriform state of two of the aortic valves, and on pouring water into the aorta it flowed freely into the ventricle.

The specimen is of interest in connexion with pulmonic disease, and illustrates the views put forward by Dr. Gairdner, of Edinburgh, as to the genesis of emphysema. The course of events, according to him, is capillary bronchitis or catarrhal pneumonia, producing bronchial accumulations and obstructions, and, as a consequence thereof, collapse of the lungs, of which we have here so good an example; differing from the ordinary pneumonia in its extremely dense feel, and the granular appearance of its section; presenting a disease termed lobular pneumonia, and by Legendre and Baily, "etat fœtal," from its resemblance to the fœtal lung; atelectasis by Jörg; and apneumatosis by Fuchs, "an intolerable mouthful" of a word, as Dr. Gairdner terms it. This collapse then follows the obstruction to the bronchial tubes, and emphysema comes on as its consequence. Dr. Gairdner has reviewed the theories brought forward before his time, and has shown that the blocking up of a bronchial tube, and retention of air, produces effects the opposite of those supposed by Laennec.

Dr. Gairdner is supported by the experiments of Mendelsohn and Traube. The former performed the following experiment:—

Tracheotomy was performed on a rabbit; a shot or small bullet was inserted into the trachea, and impacted into the left bronchus by a probe. The animal died in two days. The right lung was large and emphysematous; the left collapsed, the lower lobe in great part red, void of air, as also the upper lobe in some portions; in the midst of which were emphysematous parts. The whole lung could be inflated from the trachea, of course, after removal of the obstacle.

Traube's experiments led to the like results.

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## SUMMARY.—PHYSIOLOGY.

*Effect of Section of the great Sympathetic Nerve.*—In December, 1853, M. Claude Bernard announced to the Society of Biology, that he had just discovered the singular phenomenon of an elevation of temperature occurring as a consequence of extirpation of the superior cervical ganglion of the sympathetic system. The whole side of the face corresponding to that operated on was affected by this change of temperature, which, though quite appreciable to the hand, was readily proved by the aid of a thermometer introduced into the ear or nostril. The simple section of the sympathetic nerve produced the same effect, but in a less degree.

Pourfour du Petit, who first tried experiments on the cervical portion of the sympathetic, proved in 1727 that contraction of the pupil, falling in of the cornea, redness of the conjunctiva, &c., followed its section. He explained the contraction of the pupil by supposing a paralysis to take place of the filaments which serve to dilate it, and the injection of the conjunctiva by the loss of the elasticity of vessels which then became passively distended with blood. Dupuy, Brachet, J. Reid, did not add anything of importance to this first experiment.

The contraction of the pupil especially attracted the attention of physiologists; and, in 1846, M. Biffi, of Milan, announced that the pupil, contracted in consequence of the section, became dilated when the cephalic extremity was galvanised. In 1851 MM. Budge and Waller learned that the sympathetic owed its influence on the pupil to a particular region of the spinal cord—"*the cilio-spinal region.*" Some years before, M. Rusche of Vienna had shown that belladonna again dilates the pupil in paralysis of the third pair; whence arose his doctrine, that the circular fibres of the iris receive filaments from the third pair, destined for its contraction, that the radiating fibres, on the other hand, are supplied by the sympathetic, which acts as a dilator. Such was the state of the question when M. Bernard commenced his researches.

The extirpation of the superior cervical ganglion is followed, according to M. Bernard, by an elevation of temperature (4-5 *degrees, centigrade*): at the end of some minutes, on introducing the thermometer into the two ears of a rabbit which had been operated on, this difference was invariably manifested. It is worthy of remark, that the normal temperature of the ear being some four or five degrees (*cent.*) lower than the central parts of the body, the morbid augmentation of temperature did not exceed the natural heat in these localities. The blood returning from parts whose temperature has been thus raised, is itself warmer than natural, according to M. Bernard, who introduced a thermometer into the jugular veins.

When the animal was subjected to cold, the side operated on was found to resist the cooling influence, and grow cold more slowly than the opposite one: a warm medium raised both sides to the maximum of thirty-nine or forty degrees, *centigrade.*

Besides the increase of temperatnre, M. Bernard has also observed an augmentation of sensibility in the part. Section of the nerves of sensation and motion, when made with care *before* the union of sympathetic filaments, produced effects quite different: loss of sensation and the power of motion, *with lowering of temperature*, was the constant result of such experiments.

"It has often happened to me," says M. Bernard, "when puncturing the medulla oblongata of dogs and rabbits, in order to produce sugar in the urine, unintentionally to wound the deep origin of the portio dura of the seventh pair and thus produce a simple paralysis of motion in one side of the face. Under such circumstances there is always at the moment of the puncture a momentary increase of temperature in both sides of the head; but after some instants, when this heat, due to emotion, has disappeared, the face and ears resume their former heat; the paralysed side being sometimes slightly lower in temperature, but never, so far as I have seen, warmer than the healthy side."

A more marked diminution of temperature follows division of a nerve of sensation, previous to its union with sympathetic fibres. The same experimenter tells us:—"I divided the fifth pair on the left side in a rabbit, within the cranium, after Magendie's method; the operation, which succeeded perfectly, was immediately followed by the well-known symptoms of insensibility of the face. In half an hour the left ear was colder than the other. On the following day there still existed a very marked difference of temperature between the ears; the left (that operated on) was 3° centigrade lower than the right. The phenomena of altered nutrition, described by Magendie, then supervened. On the left side the conjunctiva was red, the vessels dilated and gorged with blood, the eyelids glued together, and the cornea already altered; the temperature, however, continued lower, notwithstanding the existence of the circulatory phenomena commonly ascribed to what is called *inflammation*."

M. Bernard further observes, that if even after these sections have been practised, the sympathetic cord of the same side be cut, an elevation of temperature occurs in the paralysed parts.

Biffi discovered that galvanising destroyed the effect which section of the sympathetic exercises over the pupil.

M. Bernard, in his summer course at the Collége de France, Brown-Séquard, in his lectures in America, both announced that galvanising the sympathetic produced contraction in the calibre of the dilated arteries, and that at the same time the elevation of temperature disappeared.

Waller, some time after, gave out the same results. After the galvanism ceases, the heat again increases, and the other phenomena reappear.

According to Brown and Waller, the increased quantity of blood in the vessels is sufficient to explain all; but it is a most remarkable fact, that even when the circulation is interrupted by the ligature of arteries or veins, the extirpation of the sympathetic ganglion at once produces increased heat in the corresponding part.—*Archives Generales*, March, 1854, and *Gazette Medicale*, Jan. 1854.

*Hepatico-renal Circulation.*—Bernard asserts that there is a direct communication (the existence of which he has as yet only succeeded in demonstrating in the horse) between the portal vein, before it enters the liver, and the vena cava ascending to the diaphragm. There exists in that portion of the inferior cava which lies behind, and is below the orifices of the hepatic veins, a muscular coat of considerable thickness, the contractions of which cause the cava and renal veins to pulsate during digestion, the pulsations not being synchronous with those of the heart. In a rabbit whose abdomen is opened during active digestion, these movements are readily perceived; and in the horse, dissection of the vena cava inferior places the existence of a muscular tunic beyond dispute. But, in addition to this muscularity, the inferior cava of the horse presents two valves, attached to its wall immediately below the orifices of the renal veins. Now, the consequences of this arrangement are as follows:—During digestion the liver becomes congested, the portal blood regurgitates, and would stagnate but for the existence of channels enabling it to pass into the inferior cava below the orifices of the hepatic veins. The blood thus diverted is not permitted at once to mingle with the general circulation before being submitted to glandular action. The muscular coat of the inferior cava contracts, and greatly diminishes its channel; the impeded blood is thus thrown backwards on that ascending from the limbs, but the valves below the orifices of the renal veins prohibit further regurgitation, and it is compelled to flow off right and left by the renal veins to the kidneys, which eliminate from it such materials as are excessive and pernicious; and so the "urina cibi" is constituted. Meanwhile, the order of the circulation is interrupted by the arrest of the blood ascending from the lower limbs, in consequence of the closure of the valves below the renal veins; but this disturbance is provided for by the existence of the vena azygos, which receive the impeded blood, and convey it to the superior cava.

Such are the views of Bernard respecting the "hepatico-renal circulation." He adduces three notable experiments to support them. In the first, cyanide of potassium, mixed with carbonate of soda, was introduced into the stomach of a rabbit, and in ten minutes the urine exhibited the characteristic blue, on the addition of a few drops of solution of acetate of iron. At the expiration of half an hour the animal was killed, and blood collected from both jugulars and both renal veins; the serum from the former furnished scarcely a trace of the presence of the salt, while that from the renal vessels contained a large quantity. A strong blue colour was also proced by the application of a solution of iron to e cut surface of the kidney; while a similar oceeding was followed only by a faint tinge ien applied to other organs.

In the second experiment, a solution of cyale of potassium, in the proportion of 20 parts the salt to 100 of water, was thrown into the senteric vein of a rabbit. The urine in a few nutes contained a large quantity of the salt, t the animal suffered no inconvenience from presence in the portal blood. When, hower, a solution containing two parts of the salt 100 of water, was thrown into the jugular in, the animal died in a few minutes, before e slightest trace of the poison could be detected the urine.

A solution of lactate of iron was injected to the subcutaneous cellular tissue on the ck of a rabbit, and a solution of prussiate potash into the cellular tissue of the thigh of e same animal. In a few minutes a blue lour was manifested at the spot occupied by e solution of iron. But when the prussiate of tash was administered by the stomach, and the lution of lactate of iron placed, as before, under e skin of the back, no blue colour was deloped in that situation; and while the urine as found by tests to contain a large quantity the salt, the serum of the jugular vein manisted but slight traces of its presence.

These experiments prove, according to the thor, that the urine formed during digestion secreted from venous blood; and thus, too, e rapid appearance in that secretion of mateals received into the stomach (a phenomenon hich astonished Sir Everard Home) may be counted for.

*The Elimination of Urea.*—In the thirteenth lume of the "Archives Gen. de Médecine," h series, will be found an interesting comunication by Bernard and Barreswil, on the imination of urea from the blood after extirtion of the kidneys. It appeared to them a ngular circumstance that whenever the kidneys an animal had been extirpated, a period of me, varying from twenty-four to forty-eight urs, always elapsed before the blood yielded analysis any traces of urea; and it immeiately became a question in what way the urea caped from the system during this interval. o ascertain this point, a series of experiments dogs was instituted. The kidneys of these imals were first extirpated, and the blood and testinal contents were subsequently carefully sted. Two of the dogs perished quickly after e mutilation, one from peritonitis, and the her from suffocation. In neither of these could y urea be detected in the blood. The gastric uids liberated, on the addition of caustic potash, suffocating ammoniacal odour; the intestinal id and bile, when similarly treated, disenged also large quantities of ammonia. In the other experiments, the animals survived longer, and died, finally, in a state of considerable exhaustion. It was observed, in these instances, that the gastric juice was much increased in quantity, and was secreted without intermission both fasting and during digestion. Large quantities of ammoniacal vapour were liberated from it by the addition of caustic potash. No urea could be detected in the blood till the animal had become weak and exhausted, and the quantity of gastric juice secreted had undergone a considerable diminution in consequence.

Bernard and Barreswil conclude, from these experiments, that after the kidneys of an animal have been extirpated, the urea is eliminated by the secretions of the intestinal tube, and chiefly by the gastric juice, in the form of an ammoniacal salt; and that no urea can be detected in the blood till, from progressive diminution of the vital powers, the intestinal fluids become more and more diminished in quantity, and thus the supplementary channels for the separation of urea are cut off. Retention of urea, they argue, is not a direct result of suppression of urine, but rather a consequence of the loss of vigour which follows it; for if the vital powers remain active, the urea escapes from the blood by other portals, when those provided for its natural elimination are closed. True it is, that in no instance was urea, as such, detected in the intestinal contents; but this circumstance is accounted for by the authors, on the supposition that it is decomposed by the acid of the stomach, and transformed into lactate or phosphate of ammonia, and in proof of this, they state that urea, when introduced into the stomach, is always changed into a salt of ammonia before it can be absorbed.

*The Curara Poison.*—The curara, according to Humboldt, is the aqueous extract of a plant belonging to the order Logonaceæ, prepared by the natives inhabiting the forests which skirt the high Orinoco, the Rio Negro, and the Amazon. It is affirmed by M. Gondet, that the Indians of Messaya are accustomed (during its composition) to mingle with it some drops of poison obtained from the most venomous serpents. Its toxic action closely resembles that of the poison of the viper, for it may be taken with impunity into the stomach, whereas a speedy death invariably follows its injection into the blood, or its introduction into any of the tissues of the body. Under its influence an animal falls suddenly dead without uttering a cry, or scarcely even moving a muscle. If, for example, it be placed beneath the skin of a bird, the animal flies away, and in a few seconds falls dead without a movement or a cry. It has been remarked by Bernard and Pelouze, that death is constantly attended by phenomena that indicate a complete extinction of the functions of the nervous system. A minute after death the nerves are flaccid, like those of an animal which has long expired; no reflex movements can be produced; the blood is always black, and frequently it coagulates with slowness and difficulty, and does not redden on exposure to air.

Yet this deadly poison may be taken with impunity into the stomach or intestines. Mucous surfaces prevent its absorption, and if an endosmometer be made of the gastric mucous membrane of a recently killed animal, so that the epithelial surface look outwards, it will be found that endosmosis will ensue between a saccharine solution within the tube and an aqueous solution of the curara without; but that none of the poison will pass through with the endosmotic current into the interior of the instrument. It must not, however, be supposed that the poison decomposes in the stomach, for it remains perfectly unchanged by admixture with the gastric juice, saliva, bile, or pancreatic fluid; but it cannot pass through the mucous membrane to enter the circulation. The lining membrane of the air-cells alone forms an exception to this rule; through it the poison passes without obstruction, and quickly produces death. But this exception is more apparent than real; for it will be remembered that in the air-vesicles the respiratory mucous membrane has lost its characters, and is reduced to a simple layer of fine and almost structureless tissue, devoid of epithelium. These curious facts with reference to the action of the curara may not be easy of explanation, but they prove that imbibition through an epithelial covering is, to a certain extent, an elective act.—*H. Ludlow, in Brit. and For. Med.-Chir. Review.*

*Function of the Liver and Spleen.*—According to Liebig, bile is a product which serves to transform certain elements of the body into water and carbonic acid. If that be true, animals from which the liver has been removed ought to yield in a given time, and proportionally to their weight, less carbonic acid than animals in which that organ remains untouched. M. Moleschott of Heidelberg has arrived at a mode of removing the liver of frogs in such a manner, that nearly a third of them survive the operation—the majority for three but some for five days. He then places the frogs in an apparatus so arranged, that whilst air enough is admitted to support respiration, the expired carbonic acid is absorbed by a Liebig's apparatus, and transformed into carbonate of potass.

M. Moleschott experimented first on healthy frogs, in such number that the weight of their bodies made altogether 100 grmes.; this weight of frogs gave, on an average, about 430 milligrammes of carbonic acid in twenty-four hours; the same weight of frogs, deprived of the liver, yielded an average of 192 milligrammes in the same time. M. Moleschott tried, as far as possible, to experiment on animals in a like condition as to age, sex, &c.

The influence of the spleen is less than that of the liver; in frogs deprived of the spleen, the quantity of carbonic acid expired in a given time was found to be to the carbonic acid expired by healthy frogs as one to one two-fifths.

M. Moleschott has also observed, that in frogs deprived of the liver, the blood does not contain sugar; and he gives this as a fact confirmatory of the opinion of M. Claude Bernard, viz.:—that in the production of sugar the liver does not play the part of a mere organ of secretion, separating the sugar from the blood, as the kidney secretes urea.—*Muller's Archiv.* 1853.

*Termination of the Nerve Fibres.*—R. Wagner has laid the following results before the Institute of Göttingen, in which he endeavours to determine the mode of termination of the sensitive nerve fibres in certain tissues. In the tissue of the teeth M. Wagner has seen the nerves terminate in free extremities, the loops frequently met with are not the terminations, but they conduct back to the plexus a nervous fibre, which passes off so as to terminate singly, and with a free extremity in another point. The primitive fibres are rarely divided.

In the tongue, likewise, there are no terminal loops; the primitive fibres do not unite, but pass separately side by side. He believes that he has sometimes seen the fibrillæ prolonged without medulla; he has not seen the corpuscles of touch in the fungiform papillæ.

In the labyrinth the author has found three orders of fibres:—first, fibres terminating in free extremities; second, arciform fibres, forming loops, the mode of whose termination he has not yet fully ascertained; third, ramifying fibrillæ, all probably leading to ganglionic cells. There are a great number of these cells in the vestibule; some of them seem to have two poles: Weber supposes that they are disposed in a manner analogous to what Müller and Kölliker have observed in the retina. In glands the termination of the fibres in loops cannot be demonstrated. The general result of his researches is thus laid down by Wagner:—"The sensitive fibres and those that preside over the development of tissues (thropic fibres), are arranged like the motor fibres: they divide very often, never form terminal loops, and end, according to the same law, in free extremities, which are confounded with, or cease to exist amidst the elements of the tissue which surrounds them, or sometimes in ganglion corpuscles, or what have been named terminal swelling (corpuscles of touch, corpuscles of Pacini, &c.)—*Schmidt's Jahrbucher*, v. 79.

*Theory of Menstruation and Fecundation.*—Professor Bischoff, of Giessen, after giving a detailed account of thirteen cases of young and healthy women, in which, in consequence of sudden death, an opportunity was afforded him of making an accurate examination of the generative organs soon after death; and, after dwelling on the difficulty of such researches, and the nicety required to find the human ovum in the Fallopian tubes or uterus in such cases, goes on to state:—"These thirteen cases seem to me to confirm a fact no longer contested, viz.: that in women, each menstrual period is accompanied by the rupture of a matured graafian vesicle, the expulsion of an ovum, and the formation of a corpus luteum. M. Coste supposes that menstruation can take place without rupture of the vesicle; but I have already observed that M. Coste does not give sufficient proof in support of his assertion, yet I do not believe that it is impossible or even unlikely.

"I unfortunately have not been able to discover an ovum in the Fallopian tube or uterus in any of the thirteen cases which I have dissected; and I have already said that this negative result was due to the great difficulty of such a search. I do not believe that the ovum is destroyed so soon, but it is so difficult to find it that I am inclined to attribute its discovery to a lucky chance, and that can only be done by persons well accustomed to such investigations; and I should require very strong proof to believe it. There have been to my knowledge two cases in which the ovum has been found; and of these two I am bound to admit that one only seems to have perfect certainty; it is that of Professor Hyrtl of Vienna. There cannot be the least doubt of the authenticity of the fact: the passage of the ovum from the ovary into the Fallopian tube was evident, and the ovum had taken three days from the first appearance of menstruation to reach the uterine extremity of the tube.

"I wish to explain myself regarding the question whether *corpora lutea*, occurring after menstruation, differ from those observed after coïtus and fecundation, a subject of which I have treated elsewhere, but have been misunderstood by some authors, amongst others by Dalton.

"The corpus luteum, resulting from menstruation, never arrives at a complete degree of development: the follicle is never quite filled, and the clot is not changed into that substance which characterizes the last period of transformation. The transformation of the clot takes place only at the margin: it shrinks up, and at the next menstrual period only a trace of it remains under the form of a yellow-brown, or dark-coloured speck, the irregular outline of which is visible on section of the ovary. At a later period there remains only a cicatrix on the surface of the ovary, a proof of the accomplishment of its function.

"After fecundation, on the contrary, the *corpus luteum* continues to be formed during the first months of pregnancy; it becomes perfectly developed, and acquires a volume, colour, and texture never met with in the *corpora lutea* of menstruation. It persists while pregnancy lasts, and does not commence to disappear till after delivery.—*Zeitschrift für Ration. Med.*, 1853.

*Secretion and Elimination of Sugar in the Animal Economy*—Dr. Marcet, in his admirable review of "Robin and Verdeil's Anatomical Chemistry," observes that—"In certain morbid states, as in the disease called *diabetes*, large quantities of sugar are found in the urine. Claude Bernard has also detected it in the saliva, the kidneys, the serosity of the pericardium, and in the spermatic fluid of a diabetic dog, but failed in extracting it from the substance of the central nervous system, the pancreas, and the spleen. The serosity contained in blisters and in vomited matters, according to M. Bernard, yielded sugar. Some sugar was found also in the acid perspiration of a diabetic patient.

"We have no precise data in regard to the amount of sugar contained in the body; it must be very considerable in man, birds, dogs, pigs, horses, and rabbits. There is much less in the reptilia, and Bernard did not find any in the liver of the eel and of the snake. It exists in general in the body in a free state, but may also be combined with common salt.

"The glucose, or sugar of the body, may either be conveyed into the system ready formed, or else be derived from the following sources:—

"1st.—The various principles of the body may themselves yield sugar; it is not yet known whether these principles are organic or fatty. Bernard has shown that the livers of dogs or cats fed for four, five, or six months upon nothing but meat, bones, and the fatty matter which this food contained, yielded sugar, whilst none was found in the portal vein of these animals.

"2nd.—The cane sugar, entering the portal vein by endomosis, disappears, and is transformed into grape sugar in the liver.

"3rd.—Glucose, or grape sugar, may enter the liver when taken into the body as food: in that case only can its presence be detected in the portal vein. Traces of glucose also evidently pass into the blood during the digestion of cooked amylaceous substances, for the chyme from the stomach to the cæcum always contains traces of that substance. A considerable part of the amylaceous matters taken up with the food pass in the intestines into the state of dextrine, which is probably one of the materials from which the sugar is elaborated by the liver.

"Bernard has shown that the secretion of sugar by the liver is under the direct control of the nervous system. If the pneumogastric nerves be cut in the region of the neck, the production of sugar very soon ceases. If the extremity of the nerves connected with the lungs and liver be artificially irritated, no change occurs; but if the upper extremity be excited, the consequence is a reflex action through the spinal cord, which, following the spinal nerves, reacts upon the liver and again causes the production of sugar. This influence may be compared with the irritation in the lungs transmitted by the pneumogastric nerves—during the inspiration of chloroform, gas, or ether, for instance—when the amount of sugar produced by the liver is sensibly increased.

"If, instead of irritating the lungs, we puncture the fourth ventricle of the brain or the olivary bodies, an increased action of the liver takes place, producing an excess of sugar, which is excreted by the kidneys. This excessive production of sugar, which can be obtained by an artificial irritation of the lungs, or of the superior extremity of the pneumogastric nerves when cut, or, finally, by the puncturing of the fourth ventricle of the brain and olivary bodies, may also be observed to occur in the human body under certain morbid conditions."

Accordingly, Messrs. Robin and Verdeil consider diabetes to be owing to various affections of the lungs, or perhaps also to some disease of the medulla oblongata.

Some experiments very recently performed by Dr. Harley, at Paris, and communicated to the Société de Biologie, appear to show that the nervous reflex action, upon which depends the secretion of sugar by the liver, is generated in the liver itself, by the stimulating power of the blood of the portal vein upon the hepatic branches of the pneumogastric nerves. Dr. Harley increased the exciting influence of the blood of the vena porta by injecting into that vein alcohol, sulphuric ether, chloroform, or ammonia, and observed, that two or three hours after the operation, the dogs experimented upon voided sugar in their urine, and remained diabetic from two or three hours to two or three days. The presence of sugar in the urine of those animals was detected by means of the double tartrate of potash and copper, and also by fermentation, so that no doubt exists as to Dr. Harley's results. —*Brit. and For. Med.-Chir. Review.*

*Some Experiments on the Secretion of the Urine.* —1. Dr. Kierulf has endeavoured to investigate the influence of considerable dilution of the blood on the quantity and quality of the urine. For this purpose he made the section of the left ureter in dogs (through a wound in the abdominal wall), and collected the urine by means of a glass tube. On the first dog, the operation was performed between 8h. 55m. and 9h. 40m. A.M., with only a trifling loss of blood. At 9h. 45m., a small venesection (amount not stated); at 11h. 40m. injection of 495 (16 ounces) grammes of distilled water (temperature 104·00) through the jugular vein. Five minutes after this, the urine was mixed with a considerable quantity of blood; the quantity of urine much increased. At 11h. 55m., second venesection. At 4h. 9m., P.M., the urine contained still blood, but in a smaller proportion. At 4h. 50m., third venesection. At 5h. the urine excreted through the unwounded ureter was likewise bloody. On the following day the urine was normal. Similar experiments on another dog were followed by almost the same phenomena. In order to learn whether the admixture of blood to the urine was caused by the increased pressure of the blood, or by a change in its composition, Kierulf subjected the same dog to another series of experiments; 346 grammes of defibrinated blood (99·5° F.) just taken from another dog, were injected through the vena saphena at 9h. 25m. A.M. The urine excreted after this operation remained perfectly clear. At 9h. 50m., injection of 495 grammes of distilled water. (99·5° F.) Soon after this, increased quantity of urine, but no change of colour, and scarcely any albumen. At 11h. 30m., venesection to the amount of some ounces; at 11h. 35m., injection of 490 grammes of water. Soon after this, the colour of the urine deeper, decided reaction of albumen. At 11h. 50m. another small venesection, after which the reaction of the urine slightly alkaline, colour rather bloody, quantity of albumen increased. A new injection of 240 grammes at 12h., was followed immediately by a considerable increase of the excretion of urine, with more admixture of blood and albumen. Concerning the composition of the blood detracted by the venesection Kierulf remarks that, while the proportion of the solid substances appeared diminished, in consequence of the injection, that of the fixed mineral constituents (the ashes of the blood) was increased. Kierulf is inclined to consider the latter circumstance to be the cause of the blood-globules exhibiting an indented appearance under the microscope. The inferences which the author draws from his experiments are as follows:—1. Considerable dilution of the blood produces at first the passage of albumen through the kidneys. He is not inclined to attribute this phenomenon to an augmented pressure of the blood. 2. The normal solid constituents of the urine become decreased, while the proportion of salts appears greater than in the normal state. 3. The quantity of urine excreted within a certain space of time does not correspond to the proportion of water in the blood. Kierulf alludes to the light which may be thrown by similar experiments on the pathology of Bright's disease, but feels himself the necessity of further observations.—*Zeitschrift für Ration. Medicin., von Henle und Pfeuffer.*

*On the Existence of Sugar in the Liver and other Parts of Hybernating Animals.*—The following is an extract from a letter recently addressed to Dr. Brinton by Professor Valentin:—"As you are desirous of knowing something about my researches on the winter-sleep, I venture to select a point which has lately excited much attention,—viz., the sugary content of the organs. You are aware that Bernard discovered the existence of sugar in the liver. His numerous experiments upon this subject were published last year in France and Germany, simultaneously. It has hitherto been believed that, in continuous fasting, the hepatic sugar constantly decreases, and at last altogether disappears. Hence it became interesting to determine how it was affected by hybernation. There are four chief methods of recognizing the sugar:—1. That of Peligot and Heller. When a solution of sugar is boiled with a solution of caustic potash, it becomes brown or brownish yellow, and developes a treacly odour. This method certainly recognizes very small quantities of sugar. But many deceptions may occur; and it is useless for a quantitative determination of the saccharine contents. 2. The fermentation-test consists in the mixture of the suspected saccharine solution with yeast, and in the decomposition of the sugar, under warmth, into carbonic acid and water. But even with large quantities of sugar, the exact amount of this substance can only be approximatively deduced from the carbonic acid developed; since considerable quantities of this gas are absorbed by the moisture present. And an attempt to expel this absorbed gas by heat introduces grave sources of error into the experiment. 3. Trommer's test is very serviceable, when people understand how to go about it; but when this is not the case, errors are very easily made. The best means of applying it is by Fehling's solution. 4. The polarizing apparatus shows the presence of grape sugar very well, by its rotating the plane of polarization towards the right. For mere ordinary recognition in this way, the small French apparatus used to determine the sugary content of milk (and consisting of two Nicol's prisms) is quite sufficient. But it is not so well adapted for quantitative researches: since one degree of the scale corresponds to 1·1 per cent. of sugar, and it is easy to make a mistake of one degree in adjusting the analyzing prism. In order to obtain the quantities of sugar by this physical method, we must have either a larger scale, or a suitable prism of calcareous spar, instead of an analyzing Nicol. In examining any organ for sugar, it must be cut into shreds, or rubbed down, and then boiled continuously with water. The filtered solution is then to be examined with the copper test. Should this give a positive result, the observations must be repeated with the solution of caustic potash and the polarizing apparatus. In a marmot which had begun to hybernate only four days before, but had eaten nothing for a week, the stomach was found quite void of food, and containing nothing but the grayish-white neutral substance usually present during the winter-sleep. The solution of its liver afforded, however, a large quantity of sugar. This observation rather surprised me, and led me to examine more carefully into the matter. A male marmot, which at the beginning of the winter-sleep had weighed two one-third pounds avoirdupois, and had eaten nothing for many days before falling asleep, lay twenty-five days fast asleep in a glass receiver. It then woke up, but fell asleep on the following day, and again remained eleven days in a state of complete hybernation. It now woke up a second time, passed urine and fæces for the first time since beginning to hybernate, and next day fell asleep again. After lying three days in this state, it was killed by being kept for some hours in an air-tight receiver. The dark-blue colour of the tongue showed that it had died of asphyxia. The body had lost nearly three ounces (about one-twelfth) of its weight, since the beginning of hybernation. The yellow and perfectly clear solution of the liver had a neutral reaction, was unchanged by nitric or muriatic acid, but was rendered opalescent by sulphuric acid. It caused an energetic reduction of the oxide of copper, acquired a deep yellow colour by boiling with solution of potash, underwent an active fermentation when mixed with yeast, and rotated the plane of polarization towards the right. We had thus a distinct saccharine content in the liver of a hybernating animal which had not taken food of any kind for more than six weeks."

*Transmission of Nervous Irritation.*—Dr. Parkes, in speaking of the advance, lately made in nerve-physiology by Eckhard, makes the following general statements:—

"1. In every living nerve there are electrical streams. It must not be thought that such streams pass, in the motor nerves, from the brain or cord to the muscles, and in the sensory nerves, from the extremities to the centres. Such is not the case. Every nerve is composed of a quantity of isolated molecules, endowed with electrical properties. In every nerve an endless number of little, or so to speak, local electrical streams are present; and when, during experiments, an electrical effect is produced on the multiplicator, this is owing to these elementary currents, each of which produces a certain effect, according to its strength.

"2. Every irritation, be it electrical, chemical, thermal, or mechanical, produces, if the nerve be in connexion with a muscle, or with some sensitive point in the brain (so as to make the muscle contract, the brain feel), an alteration in the condition of the molecules, and in the molecular stream; which alteration is shown by the multiplicator, and becomes then visible to the eye.

"3. In every *electrical* irritation of a muscle-nerve, the muscle contracts only during variations in the strength of the current, and remains tranquil when the stream is equable. Nevertheless, although not denoted by the muscle, *all parts of the nerve, and not simply those included in the current,* suffer electrical changes to which Du Bois-Reymond has given the name of electrotonic.

"4. In respect of electrical properties, no difference has been detected between motor and sensory nerves.

"The important researches of Helmholtz have shown, that in the frog the nervous irritation passes at the rate of 85 to 88 feet in a second of time, and in man at a rate of about 200 feet in a second. The temperature of the nerve exerts a great influence on the transmission, which is more rapid when the temperature is higher.

"As now the rapidity of this transmission is infinitely below the speed with which electricity passes along a wire (viz., 15,980 miles in a second), it is evident that the transmission through the nerves is not identical, is not even analogous, with the passage of common electricity along a wire. It is therefore supposed, that in the case of the nerves, the irritation passes by communication from one nervous molecule to another, in the same way as sound passes by the movement of one particle of air against its neighbour. It is supposed that this transmission takes place, less by any material shock of one nervous molecule on another, than as the result of opposite electricity acting from a distance. Du Bois-Reymond explains it thus:—Suppose a number of magnetic needles, whose ends possess opposite electrical conditions, placed in a row in such a way that everywhere opposite poles are placed together. Such an arrangement represents the nerves and their electrical molecules. Apply now a magnet to one of the end needles; the result is that the first needle moves; its movement acts then on the second needle; this acts on the third, &c., and so, by this "electrical far-working," the most remote needle is at last affected.

"The transmission of the nervous activity is, then, of electrical nature, but is not in the form of a galvanic stream; there is no nervous principle, but there are nervous molecules, and transmission along them is accomplished by an electrical agent, influencing molecule after molecule in succession."—*The Brit. and For. Med-Chir. Review.*

*The Ligature of the Pancreatic Duct.*—Herbert made his experiments (tying the pancreatic duct) principally for the purpose of proving the incorrectness of the observation of Bernard, corroborated by the commission of the Academy of Paris (Magendie, Dumas, Milne-Edwards) concerning the function of the pancreatic juice. Bernard ascribed to it, as is well known, the property of emulsifying the fatty matter, and considered as its chief action, the power of effecting such a change in the oleaginous constituents of the chyme as to make them fit for absorption. Herbert tied the pancreatic duct in two rabbits, after they had been starved for several days; on the day after the operation, the rabbits were fed with milk and bread a few hours before they were killed. At the post-mortem, the thoracic duct was found to contain a considerable quantity of a bluish-white fluid; the lymphatic vessels of the mesentery were completely filled, and of a milky colour. The same result was obtained by feeding a rabbit after the operation with roasted bacon, potatoes, and water. The further observation of Bernard and the French commission—that the lymphatic vessels of the mesentery do not exhibit the milk-white colour above the entrance of the pancreatic duct into the duodenum, that they commence to do so only two centimetres below this (0·787 inches)—is likewise not corroborated by Herbert; the latter having always found the milky colour of the vessels half an inch above the opening of the duct. The conclusions of Lenz and others are therefore confirmed.—*Zeitschrift für rat. Med., von Henle und Pfeüffer.*

*On the Development of Intestinal Worms, and their Mode of Transmission from one Animal to another.*—M. Leuckhart of Dresden has lately communicated to the Acedémie des Sciences some researches on this subject, possessing considerable interest for naturalists; his experiments seem well worthy of being recorded. He kept in two separate cages, for a very considerable time, some white mice, and in none of these creatures, of which he had, for the sake of experiment, sacrificed a great number at different times, did he ever find any hydatids. But, on placing in one of the cages some of the eggs of the *Taenia Crassicollis*, mixing them with the food and water with which the animals were fed, he observed, after some time, that the mice in that cage were infested by hydatids, whilst those in the neighbouring cage were as free from them as before.—*Archives Generales de Medecine,* March, 1854.

*Formation of Confervoid Productions under the Nails.*—It has been long known that the external skin, as well as the respiratory and digestive mucous membrane, is often the seat of vegetable productions analogous to confervæ. M. Meissner of Göttingen gives a description of a similar production, observed under the nails of a man, eighty years of age. The nails of this individual were much curved, of a line in thickness, of a yellowish colour, and quite opaque; the nail of the index finger of the right hand alone was in a normal condition. On placing small portions of the nail, previously treated by caustic potass, under the microscope, a rich network of confervoid filaments appeared among the cells which constitute the substance of the nail. This vegetable growth resembled that of *Porrigo lupinosa and Pityriasis versicolor.*—*Archiv. für Physiol. Heilkunde,* 1853.

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# THE
# Dublin Hospital Gazette.

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## RICHMOND SURGICAL HOSPITAL.

### *Cases of Lithotomy, with Remarks.*

BY CHRISTOPHER FLEMING, M.D., M.R.I.A.,

SURGEON TO THE HOSPITAL.

Having recently performed the operation of lithotomy on the adult, and child, the following communication may not be devoid of interest, from some peculiarities in the details of the cases.

Case I.—Christopher Moore, aged 29 years, was admitted into the Richmond Hospital, on the 4th March, 1854. He complained of pains in the lumbar region, and irritability of the bladder. He was obliged to pass water incessantly. His desire to do so was as urgent as it was frequent. The stream was small, was occasionally suddenly interrupted, and should be carefully controlled towards the end of micturition, to lessen pain, which was, at that time, always most acute. He had occasional incontinence of urine, and position materially influenced its discharge, this being accomplished with more ease whilst he lay on the right side than on the left, being utterly impossible in the erect posture, and barely practicable in the sitting. He often experienced in the urethra a burning sensation, accompanied with acute stinging twinges, which were relieved by pressing tightly in the hand the glans and the body of the penis, and in making any sudden exertion, or in walking, he distinctly felt a solid body moving in the bladder. He is a man of a highly nervous temperament, is liable to irregular chills, has constant thirst, and often a sick feel in his stomach. His bowels are usually constipated, and his urine is muddy. Such was the note of his case, on his admission into the hospital. The symptoms were traceable to a period twelve years distant. They were principally characterized by frequent and urgent calls to pass water, these being preceded by painful sensations in the penis, and occasional hæmaturia, after any rough exercise. At the expiration of five years his sufferings became more acute and persistent, and ultimately he was attacked with retention of urine, at irregular intervals. On one of those occasions, he applied at the Netterville Institution, when I detected the presence of a calculus in the bladder. At this period (now seven years back), I transferred him to Stevens' Hospital, where he remained under the care of Mr. Cusack for some time. The general features of his sufferings were then much as at present, and those of his urine did not materially differ from the analysis given below. He would not submit to operation, and left the hospital. From that time until within a week of his admission into the Richmond Hospital, I had never seen or heard of him; when I learned from his sister, who applied to me on his behalf, that up to five months previous, he had tolerable immunity from suffering, that he was now gradually emaciating, and that his torture, both by day and by night, was so extreme, he was determined to undergo any operation for relief. That he had been married within the last five years, and had three children; that he was now a widower, and that his habits latterly had become most intemperate. During the first month of his residence in hospital, in addition to the special sufferings notified, he was never free from more or

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vesical symptoms. After a few days all subsided, and he felt rather improved than otherwise. About this period his spirits, his appetite, and his general appearance underwent a change for the better. His pulse was more tranquil, his skin less hot, and his thirst less constant. He now made up his mind to undergo the operation of lithotomy, and all interference with the urethra and bladder, as regarded the introduction of instruments, was suspended. I came to the conclusion that the calculus was moveable in the bladder;—that it was, most probably, mulberry with lithic acid; that it was a large stone; and that the presence of renal disease was improbable.

Wednesday, 10th May.—The preliminary treatment having been adopted, I performed the operation of lithotomy, and was enabled to use No. 13 staff;—the other instruments were those in ordinary use. The full anæsthetic effects of chloroform were very slowly produced, and, ultimately, not without a certain amount of automatic muscular movements, which were very annoying. They were particularly perplexing at the moment of striking the urethra and entering the lithotome. However, no accident occurred in the operation. Its several stages were accomplished with reasonable rapidity, and the calculus, as below delineated, was removed. There was no hæmorrhage beyond that to be expected in a case where there was, necessarily, an abnormal size of vessels. One ligature was applied, and the "*cannule a dimeure,*" was introduced. He did not suffer any special annoyance from the cannula. It slipped out with ease on the third day, when the tapes were divided; and the progress of the case throughout was most favourable.

On the tenth day from the operation a portion of the urine passed along the tract of the urethra; on the fifteenth, little or none escaped by the wound; and, on the twenty-first, it might be said that the natural course was established. There was a steady improvement in his general health from a few days after the operation: and, at the present date (4th July), there is every indication of its being perfect. The natural functions of the bladder and urethra are fully restored, all urgency and pain in passing water having totally subsided. On many occasions I have examined the urine since the operation: its density improved with the health. Pus is yet ible, but the quantity is considerably

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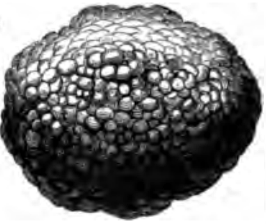
* This instrument was evidently devised after the plan originally suggested by Mr. L'Estrange, of this city. It appeared to me to be an excellent instrument for the double purpose contemplated.



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and obstruction. His clothes were con-
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although I was able to pass, with little
force, No. 7 staff into the bladder. The condition of the urine was particularly tested, with a view to the nature of the calculus, previous to operation, and the ordinary state was found as follows:—

| | |
|---|---|
| Colour . . . . . | Light straw. |
| Density . . . . . | 1025 |
| Reaction . . . . . | Acid. |
| Odour . . . . . . . | Normal. |

Deposit of a yellowish brown, flocculent, and opaque mass. It is about three or four lines in depth, and on its upper surface there is a brick-coloured stratum. In a portion of this deposit under the microscope, are visible numerous crystals, tabular and otherwise, of lithic acid. They are interspersed with large octohedral crystals of oxalate of lime, with epithelial scales, and pus and blood globules, in small quantities.

The conclusion I arrived at was, that the calculus contained lithic acid, or the lithates, in combination with oxalate of lime.

14th June.—On this day I proceeded to remove the calculus by lithotomy, adopting similar preliminary treatment, and using instruments similar to those in the case of Moore, modified for the child. The staff employed was No. 7.

Annoyances presented themselves at the commencement of the operation, as well from the impossibility of securing any urine in the bladder, as from the effects of the chloroform in producing violent and continuous straining efforts of both bladder and rectum, as in a severe paroxysm of stone, although apparently full anæsthesia was present. There was no prolapsus of the gut, but the successive protrusions of the integuments surrounding the anus were manifest to all, and the spasmodic action of the bladder equally so. On the apparent subsidence of those symptoms, I commenced the operation, but they returned in the act of making the first incision, and throughout the operation rendered necessary very great caution, in order to avoid wounding the rectum. I felt the groove of the staff, during those violent efforts, overlapped by the gut, and was obliged to watch an interval of their cessation, both to open the urethra and afterwards to enter the lithotome. There was hence some little delay in this stage of the operation. The bladder was now rapidly entered. It contained no urine, and on passing in my finger I felt the stone at as considerable a distance as in the adult.† With the impression on my

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less of pain. He never left his bed. He had repeated rigors, and insatiable thirst. During this period particular attention was paid to his urine. The ordinary range of its density was about 1016·18; its colour pale, and appearance wheyish. Its odour was, when first discharged, sour, and its reaction acid. There was always a deposit of rest about three or four lines in depth, creamish in colour, and with its surface linear. In this deposit, there were clearly discernible, under the microscope, pus and mucous globules, the latter comparatively few, and both interspersed with epithelial scales, and most minute crystals of oxalate of lime. This deposit, even after twenty-four, thirty-six, or forty-eight hours, was perfectly miscible with the supernatant fluid. The latter was fully transparent, almost aqueous, and although becoming opalescent from the application of heat, yet was rather rendered less so than flocculent by the addition of nitric acid. Such was the pathological condition of the urine, with little change, during the whole period preceding the operation of lithotomy, with the remarkable features superadded, that without any appreciable cause, the amount of purulent deposit was occasionally and rather suddenly most profuse, so much so as to occupy nearly an inch in depth in the test glass, and this without any ostensible change in the local or general symptoms, or any change in the character of the supernatant fluid as above specified.

About the first week in April, I ventured to introduce a silver catheter of medium size, but on reaching the bladder, was obliged instantaneously to withdraw it, the irritation was so extreme; in doing so, however, I felt the stone. Notwithstanding every precaution I could devise, each subsequent introduction of any instrument was followed by a paroxysm of urinary fever of more or less intensity. I did manage, however, to steal up to No. 13 on the gauge in ordinary use, and that in a very contracted and sensitive urethra, and now introduced a lithotrite of that calibre, but I could never repeat the operation: it would not be submitted to. On many of those occasions I felt no stone. On the 25th of April, he, for the first time from his admission, walked about the hospital, when he distinctly felt the stone moving, and was struck with sudden pain in the neck of the bladder, and retention of urine, which required the catheter. A few days subsequently, I passed a "sound-gauge," which I procured at Mr. Thompson's of Henry-street. Its number at the extreme end was 8, and at the curve, 10, and I found the greatest satisfaction in its manipulation.* The sharp click of the stone was distinctly heard by the pupils around on its reaching the bladder, and on separating its blades, the stone was caught, and its measurement effected with ease, *marking* a distance of from one inch and a half, to three quarters on the scale.

A large opiate was administered, and a hip-bath directed at bed-time. After twenty-four hours, however, a fresh paroxysm of fever supervened, accompanied with increased intensity in the vesical symptoms. After a few days all subsided, and he felt rather improved than otherwise. About this period his spirits, his appetite, and his general appearance underwent a change for the better. His pulse was more tranquil, his skin less hot, and his thirst less constant. He now made up his mind to undergo the operation of lithotomy, and all interference with the urethra and bladder, as regarded the introduction of instruments, was suspended. I came to the conclusion that the calculus was moveable in the bladder;—that it was, most probably, mulberry with lithic acid; that it was a large stone; and that the presence of renal disease was improbable.

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This woodcut gives an accurate outline of the calculus. It is somewhat of the shape of a walnut, measuring in the largest circumference, 3½ inches, and in the smallest 3, and so far confirming the note taken with the sound-gauge. Its weight is six drachms. It is very hard and dense, and belongs to the class of mulberry calculi. On portions of its surface and in the interstices of the little tubercular eminences, it is as if spangled over with most minute transparent crystals, some of which are, in a strong light, perfectly distinguishable by the naked eye, but most satisfactorily so with an ordinary magnifying glass.[*]

CASE II.—James Horan, aged 5 years, a fine, healthy looking boy, was brought to me, whilst some distance from town, with retention of urine. For the last two or three years he was observed to suffer from more or less of urinary distress and obstruction. His clothes were constantly saturated with his urine, and latterly there was retention so complete, as to require surgical assistance. He was now in great agony. He was pulling and dragging at his penis, the large size of which, for his age, was remarkable, and his bladder was distended up to the umbilicus. Finding no evidence of a calculus along the tract of the urethra, I concluded there was one in the bladder, and removed him to hospital, where he was admitted on the evening of the 4th June last. I introduced a gum elastic catheter, and feeling considerable resistance at its entrance into the bladder, by slight pressure overcame it, when a quantity of urine, not less in amount than a pint, was ejected with enormous force, passing along the outside of the instrument in a large and continuous stream. In the withdrawal of the instrument, considerable traction was requisite, and a distinct grating sensation was communicated to the fingers. It is unnecessary to give details of subsequent treatment. The presence of stone was ascertained by the ordinary means, the impression being that it was small, and from the manner in which it struck the sound, that it was light. I was anxious to learn, if possible, its size by measurement, but could get no instrument of sufficiently small calibre, although I was able to pass, with little force, No. 7 staff into the bladder. The condition of the urine was particularly tested, with a view to the nature of the calculus, previous to operation, and the ordinary state was found as follows:—

| | |
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| Colour | Light straw. |
| Density | 1025 |
| Reaction | Acid. |
| Odour | Normal. |

Deposit of a yellowish brown, flocculent, and opaque mass. It is about three or four lines in depth, and on its upper surface there is a brick-coloured stratum. In a portion of this deposit under the microscope, are visible numerous crystals, tabular and otherwise, of lithic acid. They are interspersed with large octohedral crystals of oxalate of lime, with epithelial scales, and pus and blood globules, in small quantities.

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[*] I have a mulberry calculus in my possession, removed from a child, which presents a similar crystallized appearance. But the crystals are whitish, and not transparent. All those are crystals of oxalate of lime, and are alluded to by Prout, who gives a plate faintly representing the appearance.

[†] There is much difference of opinion as to the exact spot for the commencement of the external incision in lithotomy. In each of the cases reported, I began rather nearer the anus than is usually practised here, and in the child, Horan, perhaps too near. I was, however, in each case, most anxious to avoid the bulb. In each it was very large as felt through the rectum; and particularly so in the child, the body and glans of whose penis were larger for the age than I have ever witnessed. Again, the organ was in almost a constant state of erection, and the arteries must

There was some slight hæmorrhage after the operation, but none to excite alarm. I deemed it more prudent to introduce the cannula. It produced, however, so much distress, that I was obliged to remove it within an hour.

The after-progress of the case has been most favourable. On the ninth day urine passed along the urethra, and from day to day the quantity increased. On the fourteenth and fifteenth symptoms of distress supervened as severe as before the operation was performed; a circumstance which I have often observed at this special period after the operation, both in adults and in children, and which probably is owing to the new function suddenly thrown on a previously irritable bladder.

These symptoms yielded to mild anodyne treatment.

At this date (4th July) the child may be considered as perfectly convalescent. The wound is almost completely healed; the urine passes the natural route, and the bladder is rapidly recovering its functions.

I find, on now examining the urine, the density less. No crystals of lithic acid, or of oxalate of lime, are visible under the microscope; and there is no more of purulent deposit than is reasonable to expect.

This wood-cut represents the outlines of the calculus. Its weight is within a grain or so of two scruples. It measures around its largest circumference nearly two inches, and on one aspect there was a sort of nipple-like projection. The colour is a light fawn, and its surface somewhat granular, without any crystalline appearance.

I had a section made of the above calculi. The alternating laminæ of the oxalate of lime and lithic acid variety are most beautifully shown in each; the oxalate deposit forming the external coating of the larger; and the lithic, combined with lithate of ammonia, that of the smaller, lithic acid being the nucleus in each. Dr. Frazer's analysis confirms the above statement; and he has observed the crystals on the surface of the larger calculus.

I cannot conclude the report of the above cases without expressing my thanks to my resident pupil, Mr. Healy, for his attention throughout their progress, and for the zeal with which he carried out my wishes.

*Remarks.*—The details given in the above report may not be considered too minute, when we reflect on the great similarity in the symptoms of many of the diseases of the urinary organs, on the numerous contingencies attendant on their treatment, and especially on the fact, that one of the main objects in the original establishment of this Journal and its renewal, has been to communicate to the medical student practical hospital information. Amongst the reflections which naturally suggest themselves on taking a review of the report, the most important, perhaps, are—the application of the study of the pathology of the urine, as an auxiliary to ascertain the nature of vesical calculi and their complication, or otherwise, with renal disease—the selection of the operation of lithotomy, as suitable to the removal of the calculi under review—and the effects of chloroform in augmenting the difficulties attendant on the operation.

As regards the study of the pathology of the urine, it must be admitted, that in cases of vesical calculi it is almost indispensable to successful treatment, and that it must often determine the propriety and the selection of operation. The presence of the crystalline deposits noted, and the continuous absence of any phosphatic appearances, almost instinctively led to the conclusion arrived at respecting the nature of the calculi, a circumstance somewhat unusual in the case of Moore, from his prolonged disease, but by no means so in that of the child, Horan. So far, the pathology of the urine taught the

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have been very considerable. I may remark, that in the vast majority of instances the urethra in the child is opened too much in front. The lithotome was passed into the bladder, and the subsequent division of the urethra quickly effected. The empty state of the bladder did not appear to me to be inconvenient, quite the contrary; I felt the stone without any difficulty, and I doubt whether the statement of Cheselden on this subject should not tend to check the over-anxiety of those who have recourse to rather cruel expedients to retain the urine.

I would hesitate, even under chloroform, to inject the bladder of the child. In the adult I have seen the injected fluid dashed out with violence under chloroform, in the operation of lithotomy, and I should much apprehend the same in the child. Indeed, in Horan's case I attempted to anticipate the contraction of the bladder, by introducing the staff into the bladder before chloroform was administered, but it was useless.

* It is unnecessary on my part to speak of the great value of the forceps alluded to. To estimate it properly it is indispensable that the operator should make himself most familiar with the peculiarity of its construction, and particularly with the movements of the handles; he will, otherwise, experience the greatest embarrassment. He should repeatedly manipulate with it, beforehand.

ıre of the calculi; but in the case of Moore, important question to solve was, the exnce or otherwise of renal disease, and here ppeared to me to be a most valuable auxy. In his case, as stated in the report, the unt of pus in the urine was very considerable. duration of his disease was lengthened, his titutional disturbance great, yet, under all e circumstances, there was never any apiable change in the density of the urine, her was there any addition to the amount of men in the supernatant fluid, as specified: it not affected by the quantity of pus present. hese features in the diagnosis of renal dis-, I attach much value. In established renal ase, of the class now under consideration, density of the urine is low, the amount of men considerable. In the case of Moore, density was not below average density, n we recollect his insatiable thirst, and e, must view his urine as "*urina potus.*" he amount of pus, in the case of Horan, was trifling; but it was present, and so was d; and yet in the supernatant fluid there was a trace of albumen present. The suspicion renal disease was not entertained, but the ciple is supported, to which I attach some e, namely, that pus in the urine, no matter in t amount, is to be traced to other sources than kidney, or, in other words, that it is added he urine "*in transitu,*" after it has passed the kidney, if the amount of albumen in the ratant fluid does not bear a proportion to pus in the deposit.* The density of the e was high in Horan's case, but the boy free from urinary fever; if he had a pasm of such, it was as if evanescent; it was roxysm of vexation from pain, in consence of obstruction to the free egress of urine the bladder. He was *now* in agony—ost in fever; relieve the bladder, and he the next moment cheerful, and playing t. Not so with Moore, he went through the stages of urinary fever; his urine was ed with pus.

ew remarks are necessary respecting the selecof operation. That of lithotrity was wholly of the question; the obstacles to its perance were insurmountable in Moore's case. patient was irritable in the extreme; the hra was peculiarly morbid, the bladder was lerably sensitive, and the most delicate local rference produced an accession of fever. The of his calculus was not objectionable for operation, but its density was; and the ction would have been attended, if attemptin a case like his, with serious immediate effects, and subsequent consequences. As to Horan, I was anxious to measure his calculus, not so much with a view to lithotrity, which, at his early age, is not a feasible operation, even admitting that his calculus was of a friable nature, as to guide me in the mode of securing the stone. I considered it was small. I apprehended that the retaining of the urine previous to operation could not have been easily accomplished, from the extreme irritability of the bladder, and that from both these circumstances difficulties would arise in the operation.

But, apart from this, an accurate method of measuring a vesical calculus in the child is, as yet, a desideratum. A sound-gauge for such purpose, on the same principle with that of Mr. L'Estrange's, ought to possess sufficient strength to hold a calculus, if it reached No. 7 or 8 on the ordinary catheter range, an extent to which the urethra of the child might be dilated without much of suffering or subsequent risk. Calculi have been removed by lithotomy from the child, of a size so small that if ascertained previous to operation, they would have admitted of dilatation of the urethra for their escape; and, again, calculi of that description have not been found in the bladder, after such operation, which more than probably eluded protracted and painful searching, by escaping, on the first introduction of the gorget or forceps, with the sudden gush of urine at that time, and at no period of life is this casualty so likely to occur as in the child, from the almost complete correspondence of the axis of the bladder with that of the wound made for its removal. I have witnessed the operation of lithotomy in the child, where no stone was found on reaching the bladder.

Sir Philip Crampton has operated when a similar casualty happened, and when, by chance, the calculus was subsequently discovered in a clot of blood on his dress.

Chelius has met with a similar case, where, by equal chance, a small calculus was found in the jaws of the forceps which had been used, whilst they were being cleaned.

For such contingencies the surgeon should be prepared beforehand. It would relieve him from a deal of anxiety. His present means are a mere guess work, in the majority of cases; at all events, a properly adjusted sound-gauge would relieve him from much difficulty.†

I have often witnessed the exhibition of chloroform in lithotomy, and have often administered it; and, in a monograph which appeared under the

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Further remarks, by the author of this paper, on Put urine may be found in the fifteenth volume of the lin Journal of Medical Science, under the head of tes on the Urinary Diseases and Morbid Condition of e in Children."

† Mr. O'Neill, of the firm of Thompson and O'Neill, of Henry-street, in this city, has promised to construct a sound-gauge, suitable to the child, on the principle of Mr. L'Estrange—and I should anticipate a successful result to his attempts, from the very efficient manner in which he has hitherto manufactured surgical instruments.

head of the Proceedings of the Surgical Society of Ireland, in the volume of the *Medical Press* for 1851, and afterwards as a distinct publication, entitled "Chloroform in Surgery," I directed attention to the remarkable effects of this agent in superinducing symptoms, for the presence of which the lithotomist should be prepared. The symptoms alluded to are specified in the report of the cases given; and I have observed identical, in Edinburgh and in London, where I had the opportunity of seeing the operation of lithotomy performed by Professor Syme and Professor Ferguson. On each occasion the full anæsthetic effects of chloroform were produced, and in each case the symptoms I allude to were manifest.

In the case of Professor Ferguson the chloroform was administered by Dr. Snow, and I need not add that the effects of the agent were conclusive, so completely so, that the child was not tied for the operation. Notwithstanding, the rectum was protruded, and violent straining efforts were made, whereby a portion of the contents of it and of the bladder escaped. In other hands than in those of Professor Ferguson, considerable annoyance might have arisen. The safe penetration of the urethra, in ordinary circumstances, is a matter of so much difficulty, and so frequently perplexing to the most experienced operator, that it is right the surgeon should be acquainted with those additional impediments occasionally caused by the administration of chloroform.

The impediments in every step of the operation are most annoying; even in the first incision the rectum is in danger, unless it so happens that there is prolapsus. In the second, the rectum laps over the groove of the staff, and unless the surgeon watches his opportunity, in the interval of the violent straining, the knife must penetrate it: and again, should he use the lithotome, which is rather the rule than the exception with ordinary lithotomists, he is perplexed at not finding the opening in the urethra for its admission. In either instance he may transfix or injure the bladder, and in the last stage of the operation the bladder may be everted. The ordinary effects I allude to are the most violent forcing and straining efforts, as if the whole contents of the pelvis were being attempted to be protruded, efforts which often continue throughout the several stages of the operation. In other cases, and especially in one under the care of Dr. Belligham, there are superadded a sort of automatic muscular movement, whereby, the pelvis is rolled about so, that it is almost impossible to fix it. In the case of Moore, it was very difficult to steady the pelvis, and I need not add, how very materially this must interfere with the objects of the surgeon. I know not how to account for these anomalies. The subjects of vesical calculus in childhood are, generally speaking, in rude health, at least those who are fit subjects for operation. These in adult life are dissipated either from ordinary habits, or from habits incidental on their sufferings. In either class of case, chloroform does not act in the most favourable or placid manner. The remedy for those anomalous effects of chloroform is, in the opinion of some, to press this agent, and to overcome them. This expedient is not successful, at least, in very many instances, and whilst on the subject of chloroform, I may take the opportunity of remarking, that few in Ireland have used it more extensively than I have, in every variety of operation, simple and capital. I believe I may add, that I have been successful in its administration, and I have the gratification to state, that no fatality has ever occurred to me. I never attempt, however, to administer this powerful agent without reflecting on the awful effect it produces on the vital functions, and moreover on the practical fact, which should be ever borne in mind, that in no one instance, even with perfect integrity of the organs implicated in those functions, can the satisfactory effects of chloroform be calculated upon. The effects on each function should be watched anxiously, and should be so carefully measured as to prevent the possibility of any sudden contingencies.

The following extract from the monograph I have alluded to may not here be inapposite:—

"I have occasionally found that the seat of disease or injury is, when under anæsthetic influence, as if cognizant of what is contemplated, or, in other words, that its organic sensibility is not destroyed; and it is, hence, absolutely indispensable in some operations that the surgeon should be prepared for this, to avoid any rash movement on his part or on that of his patient. Thus, I have seen the rectum protruded, in cases of disease engaging it, when the patient was perfectly unconscious, and all tactile sensation blunted. In a similar state of the system, I have seen the upper and lower extremity, the seat of the operation, thrown into automatic movements, whilst the remaining portions of the muscular system were tranquil and motionless; and in sounding for the stone, and in the several stages of the operation of lithotomy, I have seen a regular paroxysm of what is termed a fit of the stone, when the patient was perfectly anæsthetic, as far as the conclusive signs of such state are concerned. I have witnessed in a young officer, labouring under congenital phymosis, which he wished to be removed, the penis thrown into a state of turgescence, when the operation was perfectly impracticable until it subsided, and this, although consciousness and sensation were obliterated."

There are some other points in the report to which it might be interesting to allude, such as the immunity from pain, in the case of Moore,

lengthened a period, and his power of
g certain functions, without injury; nei-
rcumstance, however, is singular: more-
e absence of any phosphatic tendency in
ase is remarkable, and especially in the
Horan, where the calculus was obviously
d in the neck of the bladder on many
s. However I have already trespassed
nreasonable length.

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## MEATH HOSPITAL.

### *e, Peritonitis from Ulceration and Perforation of the Gall-bladder.*

BY DR. LEES,

PHYSICIAN TO THE HOSPITAL.

*rted by* Mr. Edward Fitz Maurice.

is Finn, æt. 58, a shepherd, was ad-
into the Meath Hospital, March 4th,
emaciated, and deeply jaundiced.

stated that he led a regular life, was
lthy family, and had always enjoyed
ealth until last August, when he first
d that his urine changed to a brown
and he became gradually jaundiced.
undice increased in hue, and his stools,
escribed them, became of a dirty white
He took some pills and was salivated,
ce that time has suffered from severe
tic symptoms, pain, flatulence, and swell-
he abdomen after food. He stated, that
er suffered pain until he had taken the
ial pills. In November his lower ex-
s became œdematous, and he then felt
ing in the right hypochondriac region.
xamination, a large, hard, smooth tu-
as detected in the right hypochondrium,
tending into the epigastrium; but no
ion could be detected on its surface, nor
painful on pressure. The abdomen was
d contained a small quantity of fluid;
action feeble, but regular; pulse weak
w, being only 56; bowels constipated;
levoid of bile; urine very dark brown,
ecific gravity 1015, and contained cholate

The pain, which he stated was of a prick-
racter, was chiefly referrible to the epi-
m and left side of the liver, and was always
t night. He never had vomiting, pain in
lders, or back, nor any cerebral symptoms,
often complained of an icy coldness in
k; he lay equally well on either side.
atment adopted was palliative, with mild
ves; and each day he stated that he felt
until the day before his death—about a
fter his admittance into hospital. On
y he complained of uneasiness, and a
f great weight in the abdomen. In the
he was seized with violent pain in the right hypochondrium, and extreme desire to evacuate his bowels, when he passed a small quantity of blood, but had no vomiting. The pain recurred at intervals during the night; but next morning was continuous, though exacerbated at intervals by severe paroxysms, so that he screamed loudly. It now extended all over the abdomen, and was aggravated by pressure; the abdominal muscles were very rigid; the belly tympanitic; he lay on his back; his countenance expressive of great anxiety and pain; pulse small and intermitting; the action of heart weak and irregular. He was treated with large doses of opium, frequently repeated, which had the effect of relieving the pain, but he sunk, apparently from exhaustion, in about twelve hours after the first attack of pain, having frequently passed large quantities of dark clotted blood from his bowels, but not having vomited during the course of the attack. Owing to peculiar circumstances, we were not able to procure an examination of the body till six days had elapsed, when decomposition was far advanced. On opening the abdomen we found it contained a large quantity of dark-greenish fluid; the liver appeared enlarged and congested, with very dark bile; there were two small cancerous deposits on its surface; the gall-bladder was greatly enlarged, its coats much thickened, and on its posterior surface a small opening appeared, through which the bile flowed into the peritoneal cavity. On opening the gall-bladder we found an ulcer, resembling in its anatomical characters the "perforating chronic ulcer" of the stomach, the mucous coat being removed for about the size of a fourpence, while there was only a very small opening in the peritoneal tunic. The common duct was dilated to the size of the small intestine, owing to the head of the pancreas forming a large, hard scirrhous mass, and completely obstructing the passage of bile through it; the cystic and hepatic ducts were also greatly distended. The liver was too much disorganised to make any satisfactory microscopical observations on its structure. There was no appearance of disease in the stomach.

There are many points of great interest connected with this case. First, as to the diagnosis of the cause of the jaundice; secondly, as to the nature of the tumour detected in the right hypochondrium; thirdly, the ulceration, and consequent perforation, of the gall-bladder, causing acute peritonitis and death; and, fourthly, the complete absence of any nervous symptoms, though the system was thoroughly saturated with bile, as owing to the complete obstruction of the common duct, not a particle of bile could pass from the ducts into the intestines. As to the diagnosis of the cause of the jaundice, I had no doubt, from the history of the case, that it depended on retention of bile, caused by some mechanical obstacle (most probably a cancerous tumour) making pressure on either the hepatic or common duct, and so obstructing the passage of bile from the liver into the intestine; I also pronounced, from the first examination I made of the patient, that there was no disease of his stomach, as the jaundice had come on gradually, without being preceded by any symptoms referrible to that viscus. As to the tumour in the right hypochondrium, I confess I supposed it was caused by an enlarged liver, as it felt so firm and flat, and extended literally like a portion of the liver, not causing any globular swelling, nor giving any sense of fluctuation, nor did I suspect the pancreas to be diseased, as there was no increase of the salivary secretion, nor did we ever observe any fluid fat in the alvine evacuations, which is so often met with in such cases, and to which Dr. Bright has directed the attention of the profession. The existence of an idiopathic ulcer in the gall-bladder is also interesting; first, as showing what extensive disease of the gall-bladder may be present, without being indicated by any special symptoms; and, second, from the absence of gall-stones, which are present in most cases of ulceration of this viscus. The fatal attack of peritonitis from perforation is also deserving of notice, as at first I was in doubt whether it was not merely an attack of severe hepatic colic, particularly as he stated that he had suffered from similar attacks previously; but the peculiar expression of his countenance, and the position in which he kept his body, lying on his back, with his knees drawn up, so different from the usual restless, tossing manner that patients assume when suffering from hepatic colic, convinced me that the symptoms were caused by an acute attack of peritonitis, though I certainly did not suspect a perforation of the gall-bladder, as it is a lesion of such very rare occurrence, only two examples of it being recorded in the records of the Pathological Society; one by Mr. O'Ferrall in the session of 1842, and the other by Dr. M'Dowel in 1849. Lastly, I consider it as well worth directing observation to, the complete absence of any affection of the nervous system, which, taken in conjunction with the presence of cholic acid in the urine, is an additional fact in confirmation of the suggestion which I made some time since in reference to the opinion of Dr. Alison, as to the cause of these nervous symptoms when occurring in the course of jaundice, and also with regard to the statement of Dr. Handfield Jones, as to the absence of cholic acid or its conjugates from the urine in cases of jaundice.

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# WHITWORTH AND HARDWICKE HOSPITALS.

## *Case of Fever followed by Arteritis; Obstruction of the left Femoral Artery; Gangrene of the Leg; Recovery.*

BY DR. M'DOWEL,

PHYSICIAN TO THE HOSPITALS.

*Reported by* MR. JOHN SHEIL.

Catherine Donohoe, ætat. 18, admitted into the Hardwicke Hospital (No. 6 Ward) March 4th, 1854, labouring under simple continued fever. She was then six days ill. On admission, there was much prostration present—more than usually attends fever of such a type. She had little muscular strength; the extremities were cold; the pulse 130, and weak; tongue furred; the skin cool and free from eruption. Under the use of wine, in moderate quantity, and diffusible stimulants, these symptoms of depression disappeared, and she passed favourably through fever, which terminated in convalescence on the fifteenth day.

Three days afterwards she had passed a restless night, and complained greatly of numbness and of a burning pain, with a sensation of heat in the left leg. On examination, the foot and leg were found to be already cold and livid to within about a hand's breath of the knee; the skin was mottled, presenting purplish and white patches; the lividity terminated abruptly above; the calf of the leg was extremely sensitive when pressed on.

The suddenness with which the signs of deficient circulation in the left lower extremity had arisen, suggested the suspicion that the arterial current in the limb had been arrested by a fibrinous mass detached from the valves of the heart, but careful examination showed that the heart was perfectly healthy. Pursuing the examination, it was found that there was total absence of pulsation in both tibial arteries, as also in the poplitæal and femoral trunks, up to within four inches of Poupart's ligament. The portion of the femoral artery which had ceased to pulsate felt hard, and was very tender to the touch; the upper portion of the vessel beat with much force. Gentle and repeated frictions with warmed camphorated spirits were directed to be employed, the limb to be carefully wrapped in flannel, and moderate artificial warmth maintained by hot jars, &c. Opium, in small doses, was also prescribed.

19th.—Patient complains much of pain, and of a burning heat in the limb, whilst to the hand its temperature is greatly reduced; some swelling of the foot and ankle; discoloration has not extended.

20th.—Typhoid symptoms present; pulse very rapid and weak; tongue furred and brown;

teeth dry, and coated with sordes; retention of urine existed, requiring the use of the catheter. Bark, in effervescence, with carb. ammonia. The same local treatment to be continued.

21st.—Rested better; poplitæal region much swollen, and very tender; toes blackened, and the skin shrivelled; the lividity has extended a very little upwards; the discoloured portions have entirely lost their sensibility; a patch on the outside of the leg contrasts remarkably with the surrounding parts, in being of a bright pink colour; its vitality, however, is impaired equally with the rest, for it is also insensible, and icy cold, whilst pressure does not affect the colour of the skin, showing that the redness does not arise from blood in circulation. The patient still suffers at times very acutely, and relief is only obtained by the constant use of opium. Six leeches to the ham.

25th.—The temperature of the limb is greatly lowered; for the first few days warmth was kept up by artificial heat, though the surface soon became cold when this was discontinued for even a short time; but now the limb is always cold, and to the hand of the examiner the sensation of cold which is communicated is most intense and peculiar, and remains for a considerable time afterwards.

Dupuytren's graphic description was fully realised. Alluding to the coldness of the limb, he says:—"Ce n'est pas, comme on pourrait le penser, un froid semblable a celui du cadavre, et qui n'a lieu que parce que la partie mortifiee s'est mise en equilibre de calorique avec l'air ambiant; c'est un froid glacial superieur au froid cadaverique, au froid que marque le thermomètre exposé a l'air, ou même plongé dans l'eau courante."—(*Leçons Orales*, vol. iv. p. 492.)

26th.—All constitutional disturbance has subsided; pulse 70; much emaciation; in appearance, the limb has undergone but little change. It is worthy of remark, that whilst at some times all sensation is lost, at others it is only perverted; to-day, when a warm hand is placed on the limb, which is still icy cold, the patient complained that it burned her, and caused her pain. The absence of pulsation in the femoral artery has extended a little higher up; the vessel feels like a hard cord to within two inches and a half of the crural arch. Wine and nourishing diet; bark, ammonia, and opium to be continued.

27th.—Gangrenous fœtor observed; several large black vesicles have formed on the leg and dorsum of the foot; an attempt at restoration of the circulation was observed to-day; the skin became warm and more sensible, nearly as far as the ankle; this change only lasted for a few hours; the next day it was obvious that complete sphacelus was inevitable.

On the 28th, and on two subsequent occasions, leeches were applied to the ham and to the inside of the thigh, with relief to the pain and tenderness so much complained of.

Little change occurred for several days; there was, as it were, an uncertainty as to the exact situation where the gangrene should end, until April 8th, when the line of limitation, as it may be termed, was, for the first time, apparent; at the space of a hand's breath below the knee, a chain of small clear vesicles was very apparent; pressure showed that these communicated; from this period the "line of separation" was rapidly formed; and on the 12th, a deep fissure separated the dead from the living textures. On the 18th, the bones were extensively bared; but, unfortunately, on the inner side the work of absorption had not proceeded so rapidly, and the bones were in this direction as yet too deeply covered to admit of the use of the saw. Further daily details would prove wearisome. It can be well imagined, that the struggle was long and arduous. The discharge became very profuse; sloughing extended on the inside so deeply as to cause fears for the integrity of the knee-joint itself. Hectic fever was fully developed, and the patient was all but exhausted. The deeper seated parts were long in separating; at last the bones being completely bared were sawn through, May 10th.

From this period the case proceeded most favourably; the discharge became moderate, and the stump soon assumed a healthy aspect.

June 1st.—The patient was able to be taken up and dressed; and from the 9th she was daily in the garden.

July 6th.—The patient looks a little pale and delicate, but is in excellent health. A ring, or line, from the end of the tibia is becoming detached; with this exception, the stump is quite healed; the femoral artery remains impervious as far, we may conclude, as the origin of the profunda.

*Remarks.*—In their liability to inflammation, consecutively to fever, the arterial and venous systems are strikingly contrasted. Phlebitis (usually of the adhesive form) is occasionally met with as a sequel of fever, but arteritis, under such circumstances, is almost wholly unknown. The rarity of the lesion, therefore, and the obvious connexion between the gangrene (which was of the humid or acute form) and the obstructed artery, together with the illustration which it afforded of the recuperative powers of the system under conditions so unfavourable, were circumstances calculated to render the case above recorded one of the most interesting that has passed through our wards during the past session.

Gangrene (usually of one or both of the lower extremities) has not unfrequently been observed as a sequel of fever; but when gangrene has thus originated its cause has been referrible to debility and gradual cessation, but not to obstruction of the circulation; for, on inspection in some of the cases here referred to, which proved fatal, the arteries were found empty, and capable of being fully injected. In all such instances the forces which circulate the blood have been rendered inadequate to supply nutrition to the entire system, and a part requires, as it were, to be sacrificed, in order to preserve the vitality of the rest. The capillary circulation is first arrested, gangrene supervenes, and subsequently the circulation ceases in the larger vessels.*

The instance above recorded is clearly of a different kind. In it the gangrene was sudden and rapid, whilst the evidences of arterial inflammation and of arterial obstruction preceded the gangrene, and determined its extent.

The exciting cause of arteritis in this case is obscure; but, as the ordinary agencies which are supposed to lead to its development were absent, we may conjecture that it depended on the existence of some peculiar form of blood poisoning, generated in the system during the period of fever. Venous inflammation, when secondary to fever, may perhaps likewise depend on some morbid condition of the blood.

In the treatment there was nothing peculiar. Two objects were sought to be attained—first, to restore the circulation, when it threatened to cease in the limb; and, secondly, when gangrene became pronounced, to maintain the powers of the system, and to promote in every way the development of the collateral circulation. Dupuytren says the two principal remedies are general bloodletting and opium.† Leeches applied along the course of the inflamed and obstructed vessels were found very useful in relieving the pain, which at times was very intense; but the general condition of the patient contra-indicated depletion in any other form. Opium (first recommended in such cases by Mr. Pott) was found invaluable.

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## On Plastic Inflammation of the Intestine.

*A Letter from* Richard W. O'Donovan, Esq., M.R.C.S.E., *&c., &c., Belturbet, to* Dr. Corrigan.

"I have the pleasure of sending you an interesting pathological preparation which came into my possession last week, together with some notes of the case.

"The patient is a young man; I did not see him in the early part of his illness. At the time of my first visit to him he was about ten days ill. He was very much emaciated, and had a peculiarly painful expression of countenance; his pulse was very feeble, 120; his stomach irritable; the urine scanty, and very high-coloured. His chief complaint was of pain, which he felt diffused over the entire abdomen; it was increased in paroxysms, which returned frequently, so often as every ten minutes, and was attended with the loudest borborygmi I ever heard; indeed whilst sitting at his bed-side during one of those attacks, I was astonished with the loudness of the flatulent gurgle, and on removing the bed-clothes the abdomen and its contents presented a most extraordinary appearance, the convolutions of the intestines being plainly perceptible, not alone to the hand, but the eye, and the impression of the entire conveyed the idea of a powerful effort of nature to overcome some great resistance. The bowels were usually confined, unless medicine (castor oil) was administered, and the pain was not increased on pressure, or very slightly so. I ordered him ten grains of calomel, with one grain of capsicum, to be followed, after some hours, by an oil draught, and to have bruised horse radish applied as a poultice over the entire abdomen.

"Next morning he was reported to have had four or five motions of the ordinary kind after medicine, but his mother stated that the discharge looked as if 'bruised worms' were mixed up with the fæces; the pain, however, and occasional distention remained unabated. I then ordered grain doses of crude opium to be given every second hour, with the intention of producing a powerful anodyne effect on the muscular structure of the intestines, having observed, in one or two interesting cases of acute rheumatism, treated by me with opium in large doses (and which I first saw in your practice), painful flatulent distention of the intestines thus removed almost immediately. His diet was confined to arrow-root in a little tea, and his bowels ordered to be kept free with a simple enema. On the second morning after commencing the opium treatment, he voided the portion of animal tissue I send you, without much increased pain; no blood, or mucus, or pus followed, as I can understand from his mother, and, from her general intelligence, I have no doubt of the fact as reported. He continues getting slowly better; his opiate treatment having been changed for a turpentine mixture.

"Dose ʒii., thrice in the day, with ten drops of tinct. opii.

"The intervals between the paroxysms are steadily increasing; he is also looking better, and his appetite is improving."

*Observations.*—The preparation is a thin tubular cast of the small intestine, of dark greyish colour, with a slight greenish tinge; it is about thirteen inches in length, and when examined under water assumes the curve of a coil of intestine; its interior is quite smooth, and is evidently not sloughy mucous membrane, as there

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* See Dr. Houston's Case, *Dublin Journal of Medical Science*, vol. x.; *Graves's Clin. Med.*, p. 485, and note to p. 84.

† In another paragraph Dupuytren speaks less forcibly of the value of opium, for he says, "L'opium n'est point un medicament a dedaigner."—*Op. cit.*, p. 502.

ces of epithelium upon it; its exterior
nore rough and irregular, and at the
e the mesentery arose, the thickness of
tion is considerably greater than else-
deed it is quite easy to distinguish the
of several of Peyer's glands at this part,
ick and well marked casts of them
specimen exhibits. The tube is tole-
ect throughout its course; it can be di-
ease at either end, but in the middle
less easily expanded. It is very tough,
ost of fibrous consistence. Examined
fully by the microscope, it is found to
ed of a fibrinous matrix, with a quan-
-organized material, granules, and mu-
scules interposed through its meshes:
ly belongs to the same class as those
embranes occasionally formed in various
embranes, as the result of peculiarly
nflammatory action.

ection under which this patient labour-
s to be a well marked example of the
scribed by Dr. Powell in the Medical
ons of the College of Physicians, vol. vi.
d which is named by Cruveilhier "En-
udo-membraneuse," examples of which
led by many other writers, as Andral,
Brettoneau, &c.

frequently occurs in a subacute form, is
nic in its duration, and apparently de-
n a prolonged state of inflammatory
hich may extend along a considerable
the intestinal tract, as in many of the
recorded, the false membranes which
ed were of large size, and often assumed
of complete tubes. There is no reason
e their production is limited to any
ortion of the intestinal tract; they
pear to be formed alike in the large and
stines, and even in both at the same

mptoms of the disease vary in different
; thus, whilst in some they are so slight
at as hardly to occasion any incon-
in others they are of considerable se-
nd productive of excessive pain. In
es we may recognize distinctly two
the affection: the one, in which the
are trivial, chiefly consisting of a sense
ss, heat, and tenderness in the bowels,
gularity in their action, and then, after
r shorter interval, there occur violent
ins, abdominal tenderness, often severe
; and then either spontaneously, or as
of the exhibition of purgatives, shreds
tion and casts of the bowel are dis-
A single attack alone may occur; more
y, after a time, the diseased action again
es, and other casts are formed; it may
en, that this affection leads to perma-
ture of the intestine, from some lymph
sed into the submucous tissue, and in
process of time contracting and producing diminution in the calibre of the intestine. This is the result to be dreaded, and with this change in prospective, the exhibition of mercury is necessary in most cases to produce the absorption of lymph, that might otherwise remain and take on contractile action.

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## TRANSACTIONS OF FOREIGN SOCIETIES.

### *On the Treatment of Displacement of the Uterus, by Intra-Uterine Pessaries.*

M. Depaul having read to the *Académie de Médecine* a very elaborate report, drawn up by a Commission nominated by the Academy to investigate this subject, concludes with the following:—

"It now only remains for me to submit to you the conclusions which naturally proceed from these facts, and which are besides an expression of the opinion of the entire Commission.

"1. The influence of uterine displacement on the health of women has been much exaggerated.

"2. In many cases the symptoms assigned thereto are produced by another pathological condition of the uterus.

"3. In the normal condition, the uterus, although endowed with great mobility, is directed from above downwards, and from before backwards.

"4. In a great number of women, it may be inclined or pushed towards either wall of the pelvis, without in the least incommoding the general health; the deviation then constitutes a simple deformity of no consequence.

"5. Where there exists at the same time with displacement, a chronic inflammation, or neuralgic condition of the uterus, it is sufficient, in the immense majority of cases, to treat and cure the latter, in order that the former may disappear, or if it continues, to prove that it exercises no injurious influence on the health.

"6. There exist, however, some displacements but they are by no means common, accompanied by inconveniences and symptoms so serious as to make it necessary to adopt a direct mode of treatment.

"7. These exceptional cases can very often be remedied, and in general without danger, either through the abdomen, vagina, or rectum.

"8. The facts adduced to show the efficacy of the treatment by intra-uterine instruments have been wrongly interpreted.

"9. It is a mistake to affirm that the uterus, for a short time restored to its proper position, in the majority of cases preserves this new position given it—a matter of every day observation among physicians in the habit of treating such cases, in which they prove the persistence of the displacement.

"10. In attributing cures or amelioration of symptoms, to intra-uterine pessaries, it is forgotten, that concurrently there have been used a great number of other means, the well known action of which explains the results obtained.

"11. The observations communicated to the Academy by MM. Broca and Cruveilhier are but too sad examples of the fatal influence which the new practice may sometimes exercise.

"12. These, moreover, are not isolated cases. In France, as well as in England, the cases of death consequent on the use of intra-uterine pessaries are already too numerous not to instruct even the over-confident.

"13. Independent of the women who have paid by their lives for these trials, it is sad to think of the many accidents which have befallen those who have escaped (pain, sometimes atrocious, hæmorrhage, anæmia, various nervous symptoms, shiverings, fainting, peritonitis, pelvic abscess, &c.), to say nothing of the many cases where it has been necessary to give up the treatment.

"14. Granting that the hysterometer has great advantages for the diagnosis of certain affections, it must not be forgotten that it is useless in a great many circumstances, and as its use may be succeeded by troublesome consequences, it is better to reserve it for exceptional cases.

"15. As regards the various intra-uterine pessaries and adjusting instruments, we think they ought to be proscribed, since they are useless and inefficient to obtain the desired effect, and cause most serious danger to the patient."

### *Congenital False Joint.*

*Society of Surgery.*—M. Laborie read the following communication, addressed to the Society by M. Laforque of Toulouse, of a case of congenital pseudarthrosis in a young girl, which occupied the inferior third of the leg:—

"Some months ago M. Danyau presented to the Society a young child affected with false joint in the lower third of the leg, consequent on an imperfectly consolidated fracture. I have had an opportunity of observing a deformity of the same kind in a girl eight years of age, who, in spite of this malformation, could keep on her legs, and walk without the assistance of any apparatus. The analogy which exists between the two cases, observed at different periods of life, gives some interest to my observations.

"Louise Campuzan, æt. 8, came to Toulouse, January, 1846, to be seen by the surgeons of the Hotel Dieu. Being admitted, she remained a month in that hospital, during which time we were able to observe with care the deformity with which she was affected. This girl, enjoying good health, very intelligent, as well developed as children of her age, had, in the lower third of the leg, a false joint, which the mother affirmed to have existed since her birth. As nothing remarkable had occurred at the delivery of the mother, it was to be presumed that the fracture had taken place during parturition. The midwives and physicians who visited the child were of opinion that the fracture had been intra-uterine, and the testimony of the parents established a strong presumption in favour of that view.

"The fracture of both bones of the leg was situated at the lower third of the limb; great mobility existed between the fragments, which overlapped, and were displaced in all the movements of the leg without causing the least pain. The superior fragments, cut off obliquely from within outwards, presented on their extremity an uneven surface, terminating in a point, and often caused, by the pressure exercised on the soft parts, some inflammation, which was readily removed by rest and emollient applications.

"The ends of the bones were loosely held together by fibrous expansion, which, however, gave some solidity to the false joint: so that the child, which was very lively, enjoyed every sort of game, and walked without any support, or feeling any pain, in spite of the limping that this deformity gave rise to.

"In walking, the superior fragments passed downwards and forwards over the inferior, which passed backwards. The overlapping caused considerable shortening. She could perfectly support the weight of the body, but it caused the limb to bend, forming an obtuse angle—salient anteriorly.

"When lying down the bones were easily placed in their normal position, and the limb restored to its proper length.

"It was a remarkable fact that the left thigh (that on the side corresponding with the fracture) was longer than the right, thus, to a certain extent, supplying the deficiency of length consequent on the overlapping of the fragments.

"Is such a pseudarthrosis curable? Ought surgery to interfere to remedy such a deformity? The resection of the extremities of the osseous fragments was indispensable in order to obtain a union and consolidation of the bones. The results of such an attempt were too uncertain, when compared with the possible consequences of a long painful treatment on a child eight years old, enjoying excellent health, and, with the exception of the deformity, in other respects well developed.

"We advised the parents, who did not desire any operation, to construct an apparatus such as would support the soft parts, and protect them from the friction exercised by the fragments."

## PATHOLOGICAL SOCIETY MEETINGS.

*April 8th.*

**MR. ADAMS IN THE CHAIR.**

### *Congenital Deficiency of one Lobe of the Cerebellum.*

**DR. M'DOWEL** exhibited a remarkable specimen of congenital deficiency of one of the lobes of the cerebellum, the particulars of which will be published in detail.

### *Sero-Cystic Tumours.*

**DR. FLEMING** presented to the Society a preparation and drawing, which he considered might tend to illustrate some of the peculiarities of that class of tumours called "the sero-cystic tumour." The specimen was removed from the breast of a female, aged beyond sixty years, and unmarried, who had always enjoyed excellent health, and in whom the catamenia disappeared about the ordinary period. Six years back, she accidentally felt a small tumour near the clavicular margin of the breast; it was perfectly moveable under the skin, was painless, and in size about that of a small marble. For four years it remained in a great measure stationary—in the succeeding two years it somewhat increased in bulk, but had remarkably enlarged within the two months preceding its removal; on application to Dr. Fleming, it had attained the magnitude of a large orange, and occupied the situation above quoted. It was irregular on the surface, very nodulated, and equally irregular in consistence—at some points being hard and resisting, and in one especially, soft and fluctuating to the feel: at this point the integuments covering it were so much thinned, that they presented a bluish colour from the fluid underneath; here there were some slight adhesions to the superincumbent structure, in all other parts the skin could be folded up from the tumour: its loose connexions underneath were equally manifest. The nipples were perfectly healthy and distinct from the tumour, and the neighbouring lymphatic glands were intact. This sero-cystic class of tumour, if such be the nature of that which Dr. Fleming exhibited, is by no means of rare occurrence in the female breast. It has been long since described by Sir Benjamin Brodie, and latterly most accurately, both in its details and in its several varieties, by Mr. Birkett of London. Its superficial examination would lead to the opinion, that it was an encephaloid mass, but it possesses many features truly sero-cystic. Dr. Fleming exhibited drawings of the same class of tumour in the neck of females, constituting "the hydrocele of the neck," where the colour of the contained fluid was perfectly dark, like coffee, as in some of the cells or cysts of the specimen laid before the Society; he also alluded to the other localities in which the sero-cystic tumours are to be found, and detailed the particulars of a remarkable case of what might be termed encysted hydrocele in a child, containing a very large quantity of fluid, which coasted along the tract of the cord.

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## SUMMARY.

*On the Development of Vibriones in the Urine.*—Dr. Arthur H. Hassall, at a meeting of the "Royal Medical and Chirurgical Society," having first given a description of the vibriones of the urine, enumerated the causes and conditions under which they were developed. The following were the conclusions arrived at:—

1st. That vibriones are not developed in strongly acid urines, so long as they retain their decided acidity.

2nd. That so soon as such urines have lost a considerable part of their acidity, and have become but feebly acid, vibriones begin then to appear. It is thus that the occurrence of both torulæ and vibriones in the same urine is explained. While the urine is strongly acid, the torulæ are formed, but as soon as the acidity becomes greatly reduced, the vibriones make their appearance.

3rd. That vibriones are invariably developed in different proportions in all those urines which are either feebly acid, neutral, or more particularly alkaline.

4th. That the greatest development of vibriones takes place in all those urines which contain most animal matter, as mucus, epithelium, and albumen, and which at the same time are decidedly alkaline. Hence, although not an exact test of the degree of alkalinity of any one sample of urine, or of the amount of animal matter (especially albumen) present, yet by their early appearance, and by the quantity developed, to a certain extent vibriones may be regarded as affording valuable information on both these heads.

5th. That vibriones are most freely developed when the urine is exposed to the air.

But vibriones are not the only kind of animalculæ found in urine; a second species not unfrequently occur in great abundance, entirely different in size, form, and structure: this is the *body urinarius*. The author gave a minute description of this animalcule, showing that they multiplied by fissiparous reproduction.—*Medical Times and Gazette.*

*On the Therapeutics of Phthisis.*—Dr. Theophilus Thompson of the Brompton Hospital, in his "Clinical Lectures on Consumption," states that in exhibiting cod liver oil he gives it in doses of one or two drachms at first, thrice a day, the dose being increased to half an ounce three times in the day; he has seldom found any advantage from going beyond this limit. He approves of the use of liquor potassæ, and often combines it with the oil. When the stomach will not bear its internal exhibition, he has found satisfactory results to issue from rubbing half an ounce to an ounce of cod liver oil into the thorax, night and morning. It has no influence in exciting either hæmoptysis or diarrhœa, and he finds a few drops of creasote often render the stomach tolerant of its use; infusion of walnut leaves is also said to be an agreeable vehicle. Dr. Thompson considers that *hæmoptysis* rather tends to retard than accelerate a fatal issue, and therefore he would not have undue haste used in arresting it.

Acetate of lead is the most powerful of direct astringents; gallic acid is not so prompt and effectual; turpentine is probably one of the most certain and suitable remedies in doses of about twenty minims, given at intervals. In *diarrhœa*, Dr. Thompson has found no remedy which has acted so satisfactorily as trisnitrate of bismuth, given at intervals of four or six hours in doses of five grains, combined with three grains of gum-arabic and two of magnesia; it is not prompt in its action, and must be persevered in; its good effects are permanent; it gives a better tone to the digestive organs. For arresting *night perspirations*, Dr. Thompson uses, with most satisfactory results, the oxide of zinc in four grain doses, combined with a like quantity of extract of henbane. For allaying *cough*, no remedy has acted so promptly and satisfactorily as the inhalation of fifteen or twenty minims of chloroform.

*Treatment of Strabismus from Paralysis of the third or sixth Nerve, by cauterizing the ocular conjunctiva.*—M. Deval, of Paris, has lately repeated this operation, which was first advised and performed by Dieffenbach. The cases in which it is called for are those of paralysis of the third or sixth nerve, without any actual cerebral lesion. The author operates as follows:—The parts should first be well brought into view by using a retractor to the upper lid, which latter should be drawn either to the inner or outer side of the eye, according as the internal or external rectus is affected. The operator himself presses down the lower lid, and having well cleansed the spot to be cauterized, passes a pencil of nitrate of silver along the course of the muscle. A little brush dipped in salt water may then be used to carry off the superabundant particles of caustic. The muscles, thus stimulated, has been known to act pretty well again, as proved by cases quoted by M. Deval. It should be recollected, that the internal rectus is inserted into the sclerotic about two lines from the margin of the cornea; the tendon of the external rectus is thinner, broader, and more fibrous than that of the same muscle on the inner portion of the eye, and is fixed in the sclerotic at about three lines from the margin of the cornea. Cold applications will suffice for controlling the inflammation which may follow the operation.—*Lancet.*

*On the Use of Sedatives in the Treatment of Insanity.*—Dr. Forbes Winslow makes the following interesting remarks in the last number of the *Psychological Journal*:—"In the treatment of insanity, the class of medicines termed *sedatives* play an important part. If exhibited with judgment, the most gratifying results often follow *their continuous and persevering administration.* In insanity, unassociated with active cerebral circulation, congestion, or paralysis, or after the head symptoms have been relieved by the local abstraction of blood, and the administration of appropriate medicine, the exhibition of sedatives will be followed by the most beneficial results. In recent cases they are generally inadmissible, except in delirium tremens and puerperal insanity, and other forms of derangement analogous in their pathological character and symptoms to these affections. In chronic insanity, in melancholia unconnected with abdominal repletion or visceral disease, the persevering use of sedatives in various combinations will often re-establish sanity, when no other course of treatment would be successful in dispelling the illusive impressions, or raising the drooping and desponding spirits. Battley's solution, the tincture of opium, the meconate, acetate, and hydrochlorate of morphia, the preparations of hyosciamus, conium, stramonium, camphor, hops, aconite, ether, chloroform, hydrocyanic acid, hydrochloric ether, Indian hemp, are all of great and essential service, if administered with judgment and sagacity. In suicidal insanity, when local cerebral congestion is absent, and the general health and secretions are in good condition, the meconate and hydrochlorate of morphia often act like a charm, *if uninterruptedly and perseveringly given,* until the nervous system is completely under their influence. I have witnessed the most distressing attack of suicidal mania yield to this treatment, when every other mode of procedure has failed. I could cite the particulars of numerous cases of this form of insanity radically cured by the occasional local abstraction of blood from the head, the administration of alteratives, the warm bath, and sedatives. In the exhibition of this powerful curative agent, our success will often depend upon *a ready adaptation of the form of sedative to the description of case in which it may be deemed advisable, and a judicious admixture of various kinds of sedatives.* I do not think we pay sufficient attention to this fact. I have often seen an apparently incurable and unmanageable case yield to a combination of sedatives, which had resisted the operation of any one or two when given separately. The extract of conium is often of service in cases of insanity combined with epilepsy, conjoined with mineral tonics; conium is occasionally of benefit, particularly in melancholia connected with chronic disease of the digestive organs, and with neu-

gia. In cases of uterine irritation, I have
n great good result from the combination of
ɔs, camphor, and hyosciamus. In illusions of
ion, belladonna, commencing with quarter-
in doses, will be found a useful remedy. In
anity, complicated with dysmenorrhœa, the
nbination of camphor with hyosciamus, opium,
conium, may be given with great advan-
e. The hydrochlorate of morphia, in union
h dilute hydrochloric acid, is said to be use-
in cases where the sedative treatment is
irable. I am often in the habit of exhibiting
latives and tonics in combination, particularly
ium with iron, opium with quinine, or with
infusion or decoction of cinchona. In de-
ity, with irritability of the nervous system,
ompanied by restlessness, Battley's solution,
th the preparations of cinchona, will often
ve of great benefit. The tincture of sumbul
have occasionally administered, and I think
th advantage, in paroxysmal, or convulsive
ms of insanity. I have given it to the ex-
it of one or two drachms for a dose. In
sterical derangement, the tincture of Indian
mp will occasionally allay the excitement,
d produce sleep more rapidly than any other
m of sedative. The valerianate of zinc has
t answered the expectations of those who have
oken so highly of its medicinal virtues. Tinc-
re of opium, with camphor and the tartrate
antimony, is an excellent combination in
ses of doubtful cerebral congestion. Tincture
hops, in doses of one to four drachms, may be
cessary when no other formulæ are admis-
le. As mild forms of sedatives, compound
ecacuanha powder, extract of lettuce, and the
rup of poppies, are occasionally recommended.
good substitute for Dover's powders is a pill,
mposed of opium, ipecacuanha, and soap."

*Choloroform in prolonged fasting in Insanity.*—
the Report of the Boston Lunatic Asylum,
Dr. Stedman, it is stated, that in a case of pro-
nged abstinence from food, Dr. S. administer-
chloroform, and while the patient was under
influence, "nourishing liquids were readily
allowed." "I have since," he remarks, "re-
rted to the same treatment in other cases, with
ike beneficial result. My belief now is, that
anæsthetic agents we have a perfect pre-
ntive of self-destruction from starvation, in
ose cases, at least, where there is no organic
ion of the stomach."—*Psychological Journal.*

*Felt Splints.*—Professor Frank H. Hamilton
res the following directions, in the *Buffalo
dical Journal,* for preparing felt splints, which
considers superior to gutta percha. Dissolve
ee pounds of gum shellac in two quarts of
ohol. It should be dissolved in a tin vessel,
nished with a tight cover, to prevent evapo-
ion. Spread a piece of old or new woollen
th on a board, and with a clean brush saturate
h sides of the cloth with the solution. Hang it up until it is thoroughly dried. Lay it again upon the board, and apply a second coat of the solution to one side only of the cloth. Dry again, and apply a third coat to the same side. There will be now three successive layers upon one side, and one on the opposite. While the last coat is yet fresh, fold the cloth, so that the side having three coats shall be applied to itself. Now, with a hot flat iron, smooth and press the surfaces together. When it is cold, a slight rubbing with sand paper makes it fit for use. It becomes a flat, unyielding board; but exposure to a moderate heat will make it pliant, so that it can be easily and accurately adapted to any surface.

*New Immoveable Apparatus for Fractures.*—Dr. Williams, of Cincinnati, protects the surface with bandages or otherwise; lays down the many tailed bandages, wetting each slip, sprinkling over them plaster of Paris, prepared as for stucco work, and which is now to be instantly applied to the limb. This apparatus immediately dries and becomes hard.—*Nashville Med. Jour.*, and *Montreal Month. Jour.*

*Iodide of Zinc in Venereal Sore Throat as a Caustic.*—In the *Montreal Medical Journal,* Dr. S. C. Sewell states that "the value of this salt in reducing enlargement of the tonsils is now pretty generally acknowledged by the profession, and I have used it in several cases with satisfactory results. I had a case of venereal ulceration of the throat, which resisted the acid pernitrate of mercury. As an experiment I employed the iodide of zinc with immediate improvement, followed by a speedy cure. Since that I have used it in several cases of venereal ulceration both of the throat and nose, with like success. Since 1837 I have used chiefly the acid nitrate of mercury in such cases, and am therefore competent to form a comparative estimate of their value, and I give the preference to iodide of zinc. To apply it twist a little cotton wool round the point of a wooden stick, and having dipped it in the caustic, apply it to the ulcer. One application usually suffices to destroy the morbid action."

*The Fumes of the Common Puff-ball.*—In a letter of Dr. Snow's, in the *Association Medical Journal,* Dr. Snow states, as the result of his investigations on this substance, that cyanogen gas is formed during its *slow* combustion in atmospheric air, for on passing the fumes through caustic potash-water, and then testing the solution, a copious precipitate of Prussian blue was obtained; he also noticed, that on burning the puff-ball in atmospheric air, the residual gas had no effect on a mouse which was placed in it. He says, it is very probable that carbonic oxide gas is produced during the process of slow combustion, in addition to cyanogen gas. If so, it must contribute greatly to cause insensibility, for although carbonic oxide is much less potent than cyanogen, it is a very powerful narcotic, being ten times as strong as carbonic acid, for he finds that four cubic inches of carbonic oxide to each hundred cubic inches of air, has quite as much effect on animals that breathe it, as forty cubic inches of carbonic acid. The common puff-ball is one of the numerous bodies which have been suggested as applicable to allay pain in surgical operations; it is not, however, likely to be employed, as we already possess more convenient agents.

*On the Hæmoptysis of Phthisis.*—Dr. Theophilus Thompson, in a lecture on Pulmonary Consumption, in the *Lancet*, states:— 'There has been, from time to time, considerable difference of opinion regarding the cause of hæmoptysis. There are, probably, three separate causes capable of producing this symptom. The dots and streaks of blood observed in the expectoration at an early period, when phthisis is only apprehended, may sometimes depend on deterioration of some of the extreme vessels of the lungs. The profuse and even fatal hæmorrhage now and then, although rarely occurring, may be induced by yielding of considerable vessels in cavities, the infrequency of such an event being attributable to the fact, that arteries are inapt to ulcerate, and are usually fortified by extraneous deposit. The ordinary and average hæmoptysis occurring as a symptom of consumption may probably be referred to obliteration of vessels, by the pressure of tubercular deposit, occasioning the blood to exude or overflow into the neighbouring bronchi."

*The Cure of Idiocy and Cretinism.*—Some interesting particulars on this subject have been recently published in a little pamphlet, entitled "The Adenberg Institution for Cretins, in the Canton of Berne, Switzerland, founded by Dr. Guggenbühl." This institution, it appears, is built on the Adenberg, in the Alps, at a height of about three thousand feet above the level of the sea, and was founded by Dr. Guggenbühl in 1842, who has since, with the support of a few influential friends, devoted the best energies of his mind to the difficult career which he has chosen—that of educating idiot children. No case has been too hopeless for this interesting philanthropist. Weak and helpless boys and girls, with vacant eyes, and skins wrinkled by premature old age, have by his fatherly care been changed, within a few months, into intelligent, healthful children; creatures, whose only articulation was a moan, have been taught to pronounce the letters of the alphabet; beings almost as low in the scale of existence as the brutes, with little or no sense of taste, smell, or touch, and with no idea of food, that it is necessary to eat in order to live, have been rescued from their fearful state by Dr. Guggenbühl, and are, many of them, in a fair way of becoming sensible, well-behaved, and industrious members of society. A few years back it was the general opinion that idiocy was incurable, and that all we could do for idiots was to pity and protect them. This feeling is even now carried to so great an extent among savages, that they look on these unhappy creatures with a sort of veneration, believing them to be especial favourites of the Great Spirit, who has permitted their souls to remain in heaven, while their bodies undergo the toils and hardships of this world. It shows a benevolent heart that can pity and protect a "natural;" but how much greater the benevolence, that, instead of sighing at the sight and passing on, can devote the labour of a life to the arduous task of reclaiming these children! The cures effected by Dr. G. are numerous and brilliant. The plan adopted is one of common sense, and has for its principal elements fresh air, light wholesome food, cleanliness, and exercise. When he has succeeded in rendering the body in a fit state to be the dwelling of an intelligent soul, then, and not before, does he commence his labours with respect to the moral and intellectual improvement of his patients. When he has mended the house, and rendered it habitable, he entices the wanderer in by means of kind words and reiterated appeals to the dormant intelligence. Among other means to which he resorts is that of tracing the alphabet in characters of phosphoric light on dark walls, in order that the sense of sight may be quickened, and convey the shapes of the different symbols to the brain. A tube is at the same time placed in the ear, in order that the sound of the strange hieroglyphics glittering before the eye may be made known. The lips are also taught to move in imitation of the master's, and the latent senses of sight, hearing, and speech are thereby awakened into action.

The Institution School for Cretins and Idiots on the Adenberg, was the signal for the formation of many more, and among others that at Mariaburgh, near Stuttgard, in Wurtemburg, under the patronage of the King and Royal Family; Muhldorf in Bavaria, under the patronage of the King and the Archbishop of Munich; and that of Parkhouse, Highgate, founded in 1847 by subscription, and afterwards set apart for patients for whom fees were paid; another and large institution being subsequently formed at Essex Hall, in Colchester, for the reception of the poorer and friendless class. The returns of these institutions are in the highest degree satisfactory, and will, no doubt, tend to the formation of many more of a similar kind throughout the world.

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## HARDWICKE FEVER HOSPITAL.

### *ctures on the different Complications of Fever.*

BY DR. GORDON,

PHYSICIAN TO THE HOSPITAL.

### LECTURE II.—*Hepatic Complications.*

LL writers on hepatitis seem agreed in enu- erating it as among the consequences of fever, termittent or continued.

Perhaps the most frequent affection of the rer met with, as a concomitant or conse- ience of fever, is general congestion of the gan. Its immediate cause most usually is, me grievous error of diet, and frequently both quantity and quality. The regulation of a tient's diet, when recovering from fever, is a atter of the greatest importance; the cravings r food are often most inordinate, and people herwise most rational are often unable to con- l them. As a general rule, some form of rinacious food may be given early in the morn- g, and repeated every four hours through the y. When meat is allowed, it ought to be ven not later than one or two o'clock, and the terval between it and the next meal should be mewhat longer than usual. Whatever exercise e patient is allowed to take, should not be ken soon after this meal; he should rather be couraged to absolute rest or repose. Undue ercise after a hearty meal, as well as over- stention or stimulation of the stomach, induces ongested state of the liver, which is recognized the following symptoms:—great weight and lness in the right hypochondriac and epigas- ic region, with some tenderness on pressure; alternations of nausea and desire for food; thirst, yet a feeling of oppression or fulness produced even by a drink of water, but much more by wine or malt liquors, particularly if in a state of effervescence; another symptom almost invariably present is, enlargement and distention of the hæmorrhoidal veins. Of course we seldom have an opportunity of witnessing the actual condition of the liver in this affection, but we have no reason to suppose it to be different from what we observe in the ordinary forms of congestion of the liver, from disease of the heart, or other cause, preventing or delaying the return of its venous blood.

Great relief is usually obtained from the recumbent posture, and the application of a few leeches to the enlarged hæmorrhoidal veins, which may be repeated as often as is necessary. The bowels are usually constipated, and are best relieved by a few grains of blue pill and dried soda at night, followed by small doses of sulphate of magnesia in the morning, dissolved in a large quantity of boiling water. A wine glass full of bitter infusion, as quassia or colomba, with orange-peel, about half an hour before dinner, will generally be found of great advantage. Hepatic congestion, if neglected, is very likely to terminate in chronic hepatitis.

Organic lesions of the liver are a very rare complication of the fever of this country. We have seen abscesses of the liver in this hospital sufficiently often to require its enumeration among these complications or sequelæ. They occur under three different circumstances:—

First.—As an immediate consequence of phlebitic inflammation.

Sophia West, aged 28, a servant, was admitted into the Hardwicke Hospital, January 18th. After washing the clothes of a fever patient, and the room in which he had slept, she was attacked with rigors, and the usual premonitory symptoms of fever. She became maculated, and the general febrile symptoms were of a very low type. On the fourteenth day she complained of diarrhœa and great debility. On the fifteenth, pains through all her body, referred principally to the joints.

Sixteenth day.—Diarrhœa continues; tongue brown and dry; pulse 120, small.

Eighteenth day.—Pain on moving her arms or legs greatly increased.

Nineteenth day.—Inflammatory patches of a darkish red hue have appeared on the occiput, right elbow, wrist, and hand; pulse irregular, very weak; diarrhœa has ceased.

Twentieth day.—Patient delirious through the night; the inflammatory patches appear of a paler red; additional ones have appeared on the left elbow and wrist, and on the sacrum; tongue and teeth black with sordes. Patient lies apparently insensible, with her eyes closed.

Twenty-first day.—Pulse 132, very weak, not so irregular; excessive insensibility.

Twenty-second day.—Died at 10, A.M.

In the several inflamed joints was found thin sero-purulent matter, which existed also in the sheaths of the extensor tendons of both forearms. The synovial membrane of the different joints was inflamed; the lower lobe of the left lung was solidified, it was of a very dark colour, apparently from sanguineous engorgement, but was hepatized, and a section of it sunk in water. The liver was somewhat enlarged and congested; numerous small abscesses were found on its surface and in its interior, they were very minute, surrounded by a hardened base, and not unlike softening tubercles; in several of them pus could be distinctly traced into a communicating vein. Abscesses in the liver, as a consequence of suppurative phlebitis, are of very frequent occurrence; when arising in the course of fever, they seem to differ from the ordinary traumatic form only in being more rapid in their progress, and the patient being less sensible of pain or any other annoyance in this viscus.

Secondly.—With regard to abscess of the liver as a consequence of the typhoid inflammation and ulceration of follicular enteritis, we must agree with Chomel, who observes upon it, as an extraordinary fact, how rarely abscesses of the liver are met with in fever, considering the great frequency of intestinal ulcerations. Budd also remarks:—"I have never seen abscess of the liver noticed in conjunction with ulcerated intestine in fatal cases of typhoid fever. This fact is very striking, when we consider how prevalent and fatal typhoid fever is; how generally it is attended with extensive ulceration of the bowels; and how attentively all the morbid appearances in this disease have been observed and recorded of late years in this country and in France."

One such case, however, occurred in this hospital not very long since. Mary Ryan, a servant, æt. 29, was sent from Jervis-street Hospital to the Hardwicke, on the 11th of March, 1853, the fourteenth day of her fever. The chest and abdomen were covered with a raised lenticular eruption; she was greatly prostrated; pulse 124; respiration 30; slight abdominal tenderness, confined to right iliac fossa; great thirst. The fever was complicated with bronchitis of the smaller bronchial tubes. On the twenty-eighth day some diarrhœa set in, her tongue became dry and black; she lost all appetite for drink; the diarrhœa was controlled, but returned. She continued to sink, and died on April 3rd, the thirty-seventh day of her illness.

The lungs presented the usual anatomical evidences of capillary bronchitis; they were not otherwise diseased.

The heart, spleen, and kidneys were in the normal state of health.

The liver appeared large; it was greatly softened, particularly the right lobe, which contained a large abscess, filled with sero-purulent matter, not encysted; it might have held a hen egg; the hepatic substance around it was almost in a state of putrilage. The stomach, upper part of the intestinal canal, and the large intestine, were not diseased, but the ilium showed general vascularity and extensive ulceration. Both orders of glands were greatly developed, and there were several oblong patches of ulceration, all, however, more or less superficial.

There is no morbid condition of the liver more frequently found in post mortem examinations of patients who have died of fever than softening or ramollissement of this organ. It can scarcely be called a complication, for it does not seem to possess any peculiar symptoms. Louis found it in nearly one-half of his recorded examinations. Its termination in abscess is, however, exceedingly rare. What influence the glandular ulceration of the small intestine may have on it, we are not prepared to say; but it is beyond doubt, that abscess of the liver is produced by a dysenteric inflammation of the small intestine, as well as of the large. A well-marked case of this kind is recorded in the London Pathological Transactions, by Dr. Hare.—(*Vide* Lon. Path. Trans., vol. iii. p. 349.)

But while we acknowledge abscess of the liver to be a rare complication of follicular enteritis, we have not unfrequently seen it among the sequelæ of our ordinary typhus or maculated fever. So that we may reckon—

Thirdly—Abscess of the liver as a complication of typhus fever, when there is no ulceration of the intestine to cause it, and unconnected with phlebitic inflammation.

Margaret Bradley, æt. 18, was admitted into the Hardwicke Hospital, April 23rd, 1853, in an advanced stage of typhus fever. She was extensively maculated; her pulse 124, very feeble; tongue brown and dry; complained much of cough and weight on her chest. She had the usual evidences of bronchitis of the large bronchial tubes.

On the fifteenth day the maculæ had almost disappeared, the bronchitis had altogether subsided, and the usual signs of amendment were progressing, when she suddenly began to complain of chilliness, rigors, pain in the abdomen, nausea, and loss of appetite; refused beef-tea, wine, and other nutriment which she had been taking, and of course became rapidly debilitated.

On the 5th of May, she was suddenly attacked with pain in the abdomen, referred to the umbilicus, and followed by diarrhœa. The discharges were frequent, consisted of purulent matter mixed with blood, and were passed without any pain.

Turpentine fomentations to the abdomen.

Pills of acetate of lead and opium; one every three hours.

May 7th.—Diarrhœa controlled; pain in the abdomen increased; nausea, occasional vomiting, alternations of chills and heat, followed by perspiration.

Sulphuric. acid. min. xv. ter in die.

8th.—Perspired profusely last night.

9th.—Diarrhœa returned; comes on in paroxysms, without any pain; four or five stools in rapid succession, then a long interval, with frequent fainting sensations, and cold clammy feel of skin.

10th.—Frequent chills, followed by great flushing of the face, and general morbid heat.

11th.—Œdema of lower extremities; profuse cold perspiration; patient is daily becoming weaker. She gradually sunk, and died on May twelfth.

A careful post mortem examination showed that all the morbid phenomena were confined to the abdominal viscera. The liver was large, of a bright red colour; a section of it showed the right lobe to be extensively studded with abscesses of various sizes. The largest was two inches long, with a diameter of one inch : there were four or five about this size, the remainder were very small. They all contained reddish purulent matter, but several seemed only half filled; there were many of them close to the convex surface, yet the capsule was scarcely even rendered opaque; there were none of the anatomical evidences of inflammation of the serous membrane. One or two abscesses appeared on the point of giving way; they were gradually acuminating by a small yellow pustule, and the hepatic surface around was exceedingly dark, forming a remarkable contrast with the general bright red appearance of the liver; these were not encysted, but the edges of many of them were very sharp and defined. The colon was exceedingly vascular, but not ulcerated; there were one or two abrasions of the mucous membrane, but there was no thickening or elevation of the mucous membrane around them, nor was the submucous cellular tissue anywhere exposed. There was matter lying in the colon similar to what was found in the abscesses of the liver, and similar also to the diarrhœal discharges of the patient.—(*Museum, Richmond Hospital.*)

The constitutional symptoms in this case left no room for doubt as to the existence of an internal abscess; and the strong presumption was that the liver was the seat of its existence, although some very decided symptoms were absent. The abdominal pain and tenderness were general, not confined to the hepatic region; there was no pain in the shoulder—no tension or rigidity of either or both of the recti abdominal muscles; there was no jaundice—no fulness or projecting tumour in any part of the abdomen; in fact, there was not such a collection of symptoms as to warrant making any preliminary incision or eschar of any kind over the liver. The degree of inflammation of the colon which existed is worthy of observation. We cannot imagine, for a moment, that the enteritic complication was the first organic mischief which occurred in this case. The patient was, for several days, complaining of nausea, rigors, and other symptoms of internal suppuration, when, on the 5th of May, diarrhœa suddenly set in. The character of this diarrhœa was very peculiar, and it preserved these peculiarities throughout;—it came on suddenly after nausea, or an increased sense of fulness in the abdomen; it consisted of four or five evacuations passed in rapid succession, and then a perfect interval of rest, with great increase of debility, but relief to all the other symptoms; it was, in fact, a true enteritic catarrh, and was analogous to the paroxysmal cough, which occurs in the same disease, or in empyema, when a vicarious secretion of purulent matter is effected by means of the bronchial mucous membrane. The nature of the discharges were also peculiar: with these paroxysmal evacuations, there was seldom any feculent matter passed, but a quantity of reddish, sero-purulent matter, of a horribly offensive odour. The case, then, was clearly one of typhus fever, immediately succeeded by abscesses of the liver, in which, as in the cases detailed by Dr. Mouat, in the Report of the Regimental Hospital, Bangalore,* there was a vicarious discharge of purulent matter from the mucous surface of the colon; the irritating nature of the matter thus discharged caused the superficial ulceration of the mucous membrane which was observed.

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* Med.-Chir. Review, 1838.

# WHITWORTH AND HARDWICKE HOSPITALS.

## *A Case of Anomalous Scarlatina, with Observations.*

BY J. T. BANKS, M.D.,

KING'S PROFESSOR OF PHYSIC.

J. S., æt. 28, was admitted into the Hardwicke Hospital on the 2nd of last month, labouring under small-pox of an exceedingly mild character, which ran its course to a favourable termination without a single untoward symptom.

He stated that his health had been invariably good. He appeared to be a robust, healthy man. He had been vaccinated; and he informed me that he had scarlatina seven years since. On the eleventh day after his admission into the hospital, and fifteenth from the commencement of his illness, he had so completely recovered from his very slight ailment, that he was moved into the convalescent ward. On the following morning he complained of having had chills the preceding night, followed by great heat of skin, general uneasiness, and thirst. He had passed a most restless and almost sleepless night, which he attributed, in a great measure, to pain of the right thigh. On examination of the limb, a slight elevation of a limited extent was found at the inner side, and about the middle of the thigh; the skin was of a pinkish hue, and the part was exquisitely sensitive, the slightest pressure giving rise to acute pain. The inguinal glands at the right side were found to be somewhat swollen.

On the following day the body over its entire extent was covered with the rash of scarlatina. The colour of the eruption was of a deeper hue than that presented by the majority of cases of the disease. The pulse was 120, and full; the bowels had been rather free during the night; the temperature of the body was high, and the patient complained of heat, but the feel was cold; the tongue was coated and white; the throat red, but not presenting any trace of ulceration, nor was there any notable amount of swelling.

The tumour had assumed the character of an anthrax; the skin was of a dark colour, and the base had become hard.

A free and deep crucial incision was made, which was followed by the effusion of only a few drops of blood.

The next morning (third day of the disease) the anthrax-like swelling had become gangrenous, the divided parts being of a blackish colour. The general symptoms continued unchanged, with the exception of the pulse, which was more frequent and less full. It was necessary to draw off the urine from the bladder, the attempts to pass it being fruitless; there still existed a tendency to diarrhœa.

On the fourth morning it was reported that he passed a most uneasy night, and that the bowels had acted frequently; there had also been a severe rigor at an early hour; his countenance was much changed, the eyes were congested, and he lay constantly on his back.

The surface of the body was still of a deep red tint, but in addition an abundant crop of vesicles had appeared in different situations, in some parts being almost confluent. The vesicles in general, when distinct, were small, and contained purulent matter.

Delirium of a low muttering character set in during the night, and on the following morning it was evident that life was rapidly drawing to a close.

The colour of the skin was altered; in part it retained the deep red hue, but where subjected to pressure, it was of a violet colour, approaching to black. The voice was so feeble as to be inaudible, except to a person in close proximity with the patient. The tongue was dry and coated, and the throat continued free from ulceration up to the period of his death, which occurred early in the afternoon of this day.

A post mortem examination was not obtained.

The case which I have briefly detailed appears to me of a nature so unusual, and so unlike the ordinary cases of even the most malignant type of scarlatina, as to render it worthy of more than a passing notice. The present time affords abundant opportunities of observing the exanthemata in all their varieties. Some so mild as to merit the description given by Sydenham of the scarlatina of his day:—"Hoc morbi nomen (vix enim altius assurgit);" or of the small-pox, of which he writes to his friend, Robert Boyle:—"That if no mischief be done, either by physician or nurse, it is the most slight and safe of all other diseases."

I may mention that this letter is of interest, as being the only English composition extant of him who has been truly designated "The Father of English Medicine."

Some cases there are to be met in almost every epidemic, marked by such peculiar malignancy, that the best directed treatment is found utterly powerless in preventing the tendency to a fatal termination. Of the latter, we have in the case before us an instructive example.

From a very early period it was manifest that the only hope, and that but a faint one, lay in the liberal administration of stimulants, and in supporting, by all means, the fast-failing strength of the patient.

This case of scarlatina presented two complications, which, as far as my experience informs me, are of rare occurrence, even in the most severe epidemics, namely, the anthrax-like tumour, to which, I think, we may apply the term malignant, or pestilential; and the vesicular eruption. For the first, I cannot bring to my memory a parallel in the vast number of cases of scarlatina which have come under my observation. The absence of any marked affection of the throat is also anomalous in a case of "scarlatina maligna," for in general it is upon this part that the poison, as it were by preference, expends its utmost virulence. In the epidemic of small-pox, which has been for some time prevailing, I have witnessed a tendency towards gangrenous inflammation, more particularly among children.

In three instances the scrotum has been the seat of the inflammation, which on each occasion invaded this part during the period of desiccation, and when the little patients gave every indication of approaching convalescence.

One case proved fatal after protracted suffering; in another, a child of six years of age, which lay in the next bed, recovery took place most unexpectedly, a considerable portion of the scrotum having sloughed away, leaving, however, the important organs therein contained (which had been laid bare, and which at one time seemed doomed) perfectly intact. These are the only cases in which I have observed gangrenous inflammation of the scrotum as a sequela of small-pox. In the present epidemic of small-pox, the convalescence in some cases has been retarded by the occurrence of abcesses in various parts of the body; but this is by no means an unusual event.

The vesicular eruption, in the case of scarlatina which is the subject of this notice, was unlike the vesicular spots which are familiar to the practical physician, and which are met in mild cases, perhaps, more frequently than in the severer form of the disease, and which have been adverted to by many writers, more particularly by Plenciz, Withering, and Rush. Such vesicles are mere elevations of the cuticle, containing a pellucid, colourless fluid; a miliary eruption, in point of fact; but the vesicles observed in this case contained distinctly purulent fluid, and were very slightly elevated, closely resembling the effects produced on the skin by the friction of the croton oil liniment of the Dublin pharmacopœia.

To scarlatina, with this complication, might more appropriately be applied the name "scarlatina varioloides," than to scarlatina with the miliary eruption, which was thus designated and erected into a distinct species by Sauvages.

Stoerk and Hildebrand record cases of scarlatina, in which not merely a miliary eruption existed, but in addition, *bullæ* or *phlyctenæ* were present; to this variety they have given the name *scarlatina bullosa*, or *pemphigoidea.*

Cases of putrid or gangrenous or adynamic scarlatina, presenting such characters as the case I have described, are clearly the result of blood-poisoning, and are, perhaps, of all diseases, least amenable to treatment.

# RICHMOND SURGICAL HOSPITAL.

## *Case of Hydrocele in the Female, with Remarks.*

BY CHRISTOPHER FLEMING, M.D., M.R.I.A.,

SURGEON TO THE HOSPITAL.

### *Encysted Hydrocele of the Round Ligament; Injection with Iodine; Cure; Subsequent Hernial Protrusion.*

Catherine Ryland, aged 30–32, a healthy looking country woman, and mother of four children, applied to me for a hernial truss, on the 19th of June, 1852. On examination I found all the appearances of an oblique and complete inguinal hernia on the right side. The attendant swelling had first shown itself about six months back, could not be attributed to any special cause, and was slow and painless in its growth, the exact situation in which it commenced not having attracted her attention. This swelling disappeared in the horizontal posture, until within the last week, during which time it had not alone become fixed in its situation, but had also increased in size, circumstances she was induced to refer to her new occupation as a hay-maker. She has been perfectly free throughout from any abdominal uneasiness. Her bowels act with tolerable regularity, and she had merely applied for advice in the neighbourhood, in consequence of the growing bulk of the swelling, when she was directed to the Richmond Hospital to procure a truss. Such was her history of the case. A tumour occupied the ordinary site of inguinal hernia, filling and distending the inguinal canal and the corresponding portion of the labium, so much as to encroach on the mesial line. It was somewhat cylindrical in shape, though larger below than above, unvarying in position and in size, the latter approaching that of a goose egg. It was remarkably tense in its feel, was free from any tympanitic resonance on percussion, and in its lower portion gave a distinct sensation of fluctuation. Its transparency could not be satisfactorily ascertained. It received an impulse on coughing, but rather as if it was jerked forwards "*en masse*" than otherwise affected; at its lowest portion it was most distinctly circumscribed, whilst the abdomen, quite soft and compressible, permitted the most complete isolation of it above, and rendered distinctly perceptible to the touch the round ligament.

I came to the conclusion that the tumour was not a hernia, that it was an encysted hydrocele of the round ligament, and I admitted this woman into hospital. After a few days' rest, I tapped the hydrocele, and gave exit to about six or eight ounces of a fluid having all the character of an ordinary hydrocele of the tunica vaginalis in the male. The swelling completely disappeared, and both internal and external abdominal rings could be felt, wide and patulous, the intervening canal being nearly effaced by their close approximation.

In some days the fluid reaccumulated, when, after it had reached about four ounces, I retapped it, and injected the sac with iodine. The subsequent progress of the case presented no peculiarity. Similar stages were gone through in the curative processes as in the male; the tumour solidified, and was gradually subsiding when the woman left hospital. The abdominal rings were so weak and yielding, that pressure above them, or the slightest impulse from coughing, even in the recumbent posture, caused considerable protrusion, and in the erect posture this was much more manifest. She was now provided with a truss.

I was most anxious to have a cast or sketch of the appearances in the above case, but even with the assistance of my colleagues, Messrs. Adams and Smith, I could not succeed in persuading the woman to submit.

*Remarks.*—Accuracy of diagnosis in disease forms a most important, if not the most important, element in its successful treatment, and under no circumstances is this of greater moment than in surgery. Inattention to what are termed "commemorative symptoms" may be occasionally the cause of mistakes as regards it, but it is too often the result of an affectation of that superior tact which we fancy that our consummate attainments and our large experience justify, forgetting that each case of precisely the same disease may make its own special peculiarities, and require special investigation. In no department of science is the remark more applicable than in medicine and in surgery, and perhaps more particularly in that branch of surgery now under consideration, that "presumption and self-sufficiency are solved down by the acquirement of useful knowledge, and men daily become less arrogant in proportion as they become more informed." How many are not the difficulties which the surgeon has to encounter in the diagnosis of hernia and of hydrocele, whether existing singly or conjointly, in the male, and how much are not such difficulties increased in the case of females, from causes too obvious to require more than a passing comment. The above case is as remarkable as it is rare, and the diagnosis very easy when its local features are analysed; moreover its treatment, somewhat novel, is not devoid of practical interest. The most important feature superadded is the after occurrence of hernia; and it cannot but bring to the mind of the practical surgeon a similar result in the male (child or adult), where hydrocele (whether the ordinary hydrocele of the tunica vaginalis, or the encysted hydrocele of the chord) encroaches on the inguinal canal, and distends that canal. If such hydrocele be allowed to remain for any lengthened time, or to increase in bulk, the effect must be as in hernia, only reversing the direction; the inguinal canal is more or less effaced, the external and internal rings are widened and approximated, the abdominal parietes are weakened; as long as such form of hydrocele exists so long does it act as a permanent truss against hernial protrusion; empty it —cure it—hernia must supervene; and hence the valuable practical lesson,—early and accurate diagnosis—early and accurate treatment.

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## EXTRACTS FROM FOREIGN JOURNALS.

### *Of the principal Tænifuge Medicines actually in Use, and of the New Drugs of this Nature lately introduced from Abyssinia, viz., Saoria and Tatzé.*

By M. STROHL, Strasbourg.

[Extract from a Memoir, read to the Society of Medicine, April, 1854.]

Amongst the really active tænifuge drugs, some are indigenous or European, others exotic: amongst the first are tin filings, root of the male fern, bark of the pomegranate root, and turpentine. I shall make no mention of the pumpkin paste, and gourd seed of MM. Brunet and Lamothe, nor of the association of strychnine with santonine, an over-energetic preparation, nor of the anthelmintic oil of Chabert, or other very fetid or disagreeable oils, whose action is slight, nor of ether, for it is too uncertain.

The filings of tin have really a tænifuge effect, but often fail in producing the desired result; as it does not, of itself, produce alvine evacuations, it is necessary to commence and terminate the treatment by a purgative; a considerable dose is given every morning fasting, during three to eight days, and if by this time the cephalic portion has not been expelled, the treatment may be recommenced.

The root of the male fern is an anthelmintic, long in use against tape-worm; it constitutes the active part of many secret remedies; its therapeutic action has been often contested, and from various causes very different results have been obtained. The decoction of this drug should be totally rejected, since it is very disagreeable to take, and possesses little activity, because the oleo-resinous principle is very sparingly soluble in water. The powder forms an excellent tænifuge, when recently prepared from freshly gathered roots, and given in considerable doses. As the powder is bulky, an ethereal extract of it has been prepared, called, also, "oil of male fern," of a thick consistence, and brown colour. This preparation is generally preferred to the powder, as more active, and more easily taken; it is administered in doses of ʒi.–ij. in capsules.

It would seem, then, that the value of our indigenous tænifuge medicines is diminished by their frequent inefficiency, and their occasionally

action on the digestive canal; this
known to all physicians, explains why
xotic, lately introduced into this de-
of medicine, *kousso*, was taken hold of
much energy. At present I wish to
our resources by two other therapeutic
oming from the same country, *saoria*
;—the fact of these making their ap-
from the same source is, in itself, a
their efficacy; for it is known that in
a tænia is endemic—that most of the
ts are constantly affected by it. Kousso,
sso by Bruce and Schimper; cusso, by
Rochet d'Hericourt, and Aubert, is not
recently discovered substance. Bruce
s a detailed account of it in his voyage
urce of the Nile, undertaken between
73; he called it in honour of Sir Joseph
resident of the Royal Society, Banksia
ca. Blumenbach, in his Encyclopedie
ue, 1811, gave it the name of Hagenia
ca. Nevertheless, its therapeutic pro-
ere quite unknown until 1822, when
er, a French physician at Constan-
published a pamphlet on a new tæni-
effects of which he had tried; hence,
got the name Brayera Anthelmintica,
still retains. It was not, however,
nerally used in Europe until the year
hen a considerable quantity of it was
by M. Rochet d'Hericourt. M. Schim-
ernor of Adoa, in Abyssinia (to whom,
as his learned relative, M. Schimper,
of our Museum, we owe the new thera-
reasures which we now have at our
, informs us, that the Abyssinians, who
ularly once a month, or every two
a dose of some tænifuge, and very often
correct its acrid astringent taste by
ts, and lessen the astringent action of
in it contains, by purgatives.

ænifuge action of kousso is no longer
by any one—it may even be said to be
;—this follows not only from what we
its employment in Abyssinia, but also
numerous trials made of it in France,
, and England. Poisonous effects have
llowed its use;—most patients com-
ch of its bad taste; and in a certain
of cases, vomiting and colic have super-
Many cases have been noticed, where
unrelieved by fern or pomegranate, have
ed triumphantly by kousso.

pinion of M. Pruner, who has expe-
on a grand scale on persons of different
nations, is peremptory on this subject:—
never obtained," he says, "from other
drugs, as ether, fern, pomegranate,
hich at all approach, for certainty, to
when properly administered;" it is,
eless here to cite in detail any of the
s cases furnished in our country. In
saying, however, that the effect is constant, I beg to state, that it is of the highest importance to give real kousso, of good quality, not too old or adulterated.

From what we now know, we can state, that good kousso is a better tænifuge than pomegranate or male fern; it is equally efficacious against the botryocephalus, as against the tænia solium; it acts gently without injuring the intestines, or leaving any bad consequences. Unfortunately, it does not seem to cure *radically.*

The mode of administration is very simple: a light repast on the previous evening, and a gentle purgative if there be constipation: the next morning, while fasting, ℥ss. to ℥i. of finely powdered kousso, mixed in half a pint of water, and taken at intervals two or three times. Some hours after, if the bowels do not act, a dose of castor oil; light diet the same day.

The two new tænifuge remedies that I would wish to introduce to the Materia Medica, and which are, at least, equal to, if not superior, to kousso, are fruits—*saoria* and *tatzé.* Saoria (*sauarja*) is the ripe dried fruit of the mæsa (*bacobotrys*) picta of Hachstetter, and not of the mæsa lanceolata of Forskal. According to M. Schimper, it is found throughout all Abyssinia at an elevation of 7,000 to 9,000 feet; sometimes higher, sometimes lower, but never below 6,000 feet above the sea. It grows in fresh shady places, generally on the mountains, on the margin of narrow and rather damp valleys, amongst other shrubs and trees. It is not met with on the open plains.

An under shrub; stem furrowed longitudinally; leaves alternate, lanceolate, pointed, glabrous, coriaceous, dentate, slender at the base, elliptical, furnished with long petioles. Flowers diœcious, small, whitish, collected in axillary clusters; each cluster is compound at its inferior part, simple at its extremity; half the length of the leaves. Calyx gamosepalous, having five oval lobes, acute, ciliated, guarded at the base by two bracteoles. Corolla almost campanulate, having five divisions. Five stamens, free, enclosed in corolla, and opposed to the petals. Ovary adherent to the calyx; style very short; stigma round at the summit. Fruit an ovoid drupe, two-thirds covered by calyx, and of a greenish yellow colour; seed turbinate, angular, flattened on the summit, covered by resinous matter. The great diameter of the fruit is about one to two lines.

The taste of it is at first rather aromatic, oily, and astringent, and leaves, for some time after, an acidity in the back of the throat.

Concerning this drug, M. Schimper reports:—"These fruits, fresh or dried, are the surest and best tænifuge; the dose of the dried fruit is 32 to 44 grammes (rather above an ounce), reduced to powder, and administered in thick soup; this medicament acts as a purgative, kills and expels the tænia without much affecting the general health of the patient, which is not the case with kousso, which latter rarely kills the tape worm. Kousso does not grow in all localities, while saoria is found in all parts of the country (Abyssinia), and could probably be cultivated and rendered indigenous in Europe."

Since among us tænia is not very common, different physicians were applied to and requested to make use of these new remedies in their practice, recording their observations; these are unfortunately incomplete in many points, but are sufficiently conclusive to leave no doubt as to the tænifuge action of the medicine.

Here the author cites observations on thirteen cases, in some of which the patients were the subjects of tape worm, in others it was suspected, or the drug was administered with the view of determining its purgative action; two of these we quote:—

Case 6.—A lady about 36 years of age, very nervous and hysterical, had for a long time complained of divers abdominal pains and derangements; having passed from time to time fragments of tape worm, she had taken, six months before the time when I saw her, decoction of pomegranate root; the dose expelled a long piece of the worm, but produced violent symptoms, such as vomiting, diarrhœa, colic for some days, and for a considerable time afterwards the patient felt herself worse than usual.

I was called on to take charge of the patient, in the beginning of August, 1853; and as some days after she passed some fragments of tænia, I prescribed the powder of saoria in soup. On the previous evening she had only taken soup, not observing any strictness as to diet during that day. The dose was taken with some repugnance, but did not produce nausea. Some hours after slight intestinal pain, followed by four stools, in which were found fragments of tapeworm; one piece of considerable length, one extremity of which was drawn out fine, but still presented traces of joints on it; the head was not found. No particular inconvenience arose either at the time or in the course of the night, and the next day the patient was in her usual state.

In order to obtain the complete expulsion, a week after I gave another dose in the same manner. This time the repugnance to swallow it was greater, and nausea without vomiting supervened; slight colic and diarrhœa followed, but no pieces of the worm.

The general health was not more affected than on the former occasion.

Case 7.—Madame L., æt. about 40 years, of a rather delicate constitution, had passed for some time joints of botryocephalus. She took, while fasting, a dose of the powder of saoria in a thick soup of lentils. The medicine, taken with but slight repugnance, caused neither vomiting nor colic. The stools passed during the day contained some long portions of tænia ; the general health suffering no derangement. It is a curious fact that the urine passed on this and the following day was of a decided violet tint, like that produced on adding tannin to a weak solution of a salt of iron.

From the thirteen cases mentioned five are to be deducted in which the saoria was administered to prove its peculiar action on the urine, &c., and in which the tænia was only suspected, but not known to exist. In the eight remaining cases the parasite was every time expelled. In no one of our cases in which the portions expelled were examined has the head been found. Has it been passed, but not found on account of its small dimensions? or has it still remained in the intestine? These are questions which cannot at present be answered.

Saoria exercises a special action on the urine; it gives it a violet colour; that seems to me to arise from a peculiar colouring matter, analogous to that found by many observers in the urine after the administration of santonine, which gives it an orange red colour. I have not observed any increase in the quantity of this liquid, nor any symptoms of a special action on any other organ.

From the preceding observations I draw the following conclusions:—

1st.—Saoria is a tænifuge more certain in its action than those of indigenous origin; its action cannot yet be pronounced never failing; it would seem to be tænicide.

2nd.—Its action is gentle; it is rarely accompanied by disagreeable effects, and not difficult to take.

3rd.—It may be administered readily, and without fear, to young children, women, and in general to persons of enfeebled constitution and weakened digestive system.

4th.—These properties give it a superiority over our indigenous tænifuge remedies.

5th.—It is preferable to kousso on account of its gentle action, and also on account of the low price at which, in all probability, it will be obtainable, growing more abundantly than kousso. The ease and length of time of its preservation are likewise advantages over the latter as well as the male fern.

6th.—Time only can tell whether its effect be radical or merely palliative.—*Gaz. Médicale.*

*(To be continued.)*

### *On the Use of Opiate Inhalations and Fumigations.*

By DR. LOMBARD, of Geneva.

The accounts given by travellers in the East have long rendered me familiar with the effects of the fumes of opium in those who give themselves up to this destructive habit. I have read in the works of travellers in China, the description of the cafés, where the smokers, stretched at their ease, on the cushions of the divan, quietly puff the intoxicating smoke of opium, and soon fall into a state of tranquillity, more or less complete; or a state of intoxication like that resulting from the use of alcoholic drinks, presenting every intermediate condition, from expansive joy to brutal frenzy, from the most tranquil contemplation to absolute stupor. I must, however admit that these latter results of opium smoking are much commoner than the state of cerebral excitement, to which the *Gazette Medicale* traces the murderous effects following its use in the island of Sumatra.

The importance that I attach to the establishment of this fact will be understood, when I state, that for more than two years I have made use of it as a therapeutic agent, by means of inhalation; whereas if I had feared these direful effects, I should have hesitated to bring into use a mode of treatment likely to be followed by such disastrous results.

I am aware that the attempt has often been made to introduce opium into the nasal fossæ, chiefly for the abortive treatment of coryza, either by means of injections of water and laudanum, or by making the patient snuff up a powder of sugar and morphine mixed. But the end I wish to attain to is very different; the greater tenuity of the smoke, not less than its warmth, allows it to penetrate, without pain as without difficulty, into the crevices of the nasal fossæ; a result which cannot be obtained by a liquid, still less by a powder, however, impalpable.

The method that I am about to submit to your notice, after two years and a-half of clinical observation, seems to me very different from those of which I have just spoken, and I can affirm, without the least fear that experience will contradict my assertion, that the inhalation of opium smoke into the nasal fossæ is a most useful therapeutic resource.

I shall first mention some of the cases in which it has prospered admirably in my hands. You have, no doubt, met with, in your practice, cases of coryza, accompanied with lancinating pain in the frontal sinus; pain which sometimes becomes very intense. In such cases it is, that I have seen the opium fumigations produce truly marvellous results; pain has ceased as if by enchantment, and an almost intolerable state has been succeeded promptly by remarkable relief.

In a case of this kind that was under my care some eighteen months ago, the pain was so intense as to make the patient cry out, and induce him to believe, although of a firm and by no means pusillanimous disposition, that he was suffering from a dangerous cerebral affection. These pains came on in the course of a catarrh, accompanied by intense coryza, produced by a cold blast playing all night on the face of the patient. Two or three fumigations were sufficient to remove the pain. Some slight return of the same suffering yielded promptly to the same remedy, to the exclusion of all other treatment.

A cure so prompt and easy gave me confidence in a remedy that I then merely experimented with, especially when my memory recalled a great number of cases in which other methods of treatment had failed, and the frontal pain had continued, in spite of the most varied medication.

The opiate fumigations are of use not only in the continued neuralgic pain, as in the patient already alluded to, but also in the periodic form of that disease: for this circumstance does not prevent the success of the inhalation of opium. In fact, in the majority of cases I have had to treat, the frontal, temporal, or zigomatic pain accompanying catarrhal coryza is met with under the periodic form; nevertheless, this method is quite sufficient to cure the malady, without the assistance of any other medicament. Two patients, on whom I tried the effect of opiate fumigation in February, 1852, were both attacked with coryza, complicated with periodic pain. In one of them the access returned regularly at eight o'clock in the morning, and lasted till four o'clock in the afternoon; whilst, in the other, the afternoon was the time at which the return of the periodic frontal pain took place; in both cases the opiate fumigations, without any other treatment, brought about a prompt recovery. It is not only in the cephalalgia connected with coryza, that I have thus employed opium, but also in certain cases where the neuralgic pain was symptomatic of some other morbid affection, or idiopathic.

After making mention of a variety of other cases in which Dr. Lombard had adopted this mode of treatment, so as either to cure or considerably relieve his patients, he proceeds to consider the doses of the drug, and the manner in which it should be used.

"I commenced with five centigrammes (about one grain) of pulverised opium, mixed with as much sugar, and sometimes an equal part of gum benzoin; later I ordered ten or fifteen centigrammes in each fumigation; but the intermediate dose of ten centigrammes seemed to answer all the indications, and produce the desired effect. I have repeated the fumigations two or three times a day, but sometimes having had recourse to them oftener, I did not regret it, having witnessed no bad effect from it.

As regards the mode of administration, it is as simple as possible:—I heat in the fire a thin plate of iron, as a shovel for example, and I direct the patient to take the powder in small pinches and throw it on the hot iron, taking care to hold the head over it, so as to breathe the fumes freely not only through the nostrils but also through the mouth.

I have often employed the smoke of opium, obtained by another method, which consisted in mixing a solution of opium with agaric prepared and properly dried.

By soaking a certain quantity of amadou in a known quantity of this tincture, we can administer a dose as exact as of the powder itself. The amadou so prepared is lit and burnt under the nose of the patient. In fine, I do not hesitate to advise the employment of opiate fumigations in all cases of neuralgia occupying the frontal, temporal, or zigomatic regions, either of a continuous or periodic character; although it is to be remembered that it is above all in the catarrhal neuralgia, often complicating coryza, that the employment of my method is found to succeed most satisfactorily.—*Gaz. Médicale.*

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## SUMMARY.—SURGERY.

*Diseases of the Joints.*—Bonnet,* desirous of learning which was the weakest part of the capsule, and where rupture or perforation would most readily take place, forcibly distended the different joints in the human subject with injection. The forcible filling of a joint with fluid throws the bones into that position in which the cavity is largest; the knee becomes flexed; in the hip, the thigh is bent upon the abdomen, abducted and everted; in the shoulder, the arm is abducted to 35°, and slightly bent forward; when the elbow-joint is distended, the forearm is bent at a right angle, the hand midway between supination and pronation; in distention of the wrist-joint the hand is straight; in distention of the ankle, the toes are pointed downwards. Fluid thus thrown into a joint effects a separation of the articular extremities of the bone; the capsule assumes a knobbed or lobulated appearance, from its unequal power of resistance. Forcible movements, under these circumstances, will cause laceration of the synovial membrane and rupture of the fibrous capsule in that spot where it is naturally weakest: as, for example, in the knee-joint, in front, under the quadriceps extensor cruris; in the hip, near the notch in the acetabulum, or near the trochanter minor; in the shoulder, by the insertion of the subscapularis tendon; in the elbow, either by the insertion of the triceps, or into the anterior intercondyloid fossa; in the ankle, the capsule gives way both in the front and back of the limb. The fluid becomes infiltrated among the surrounding structures.

The treatment of acute synovitis by mercury does not receive from Bonnet the same high praise accorded to it by the English surgeons.

"Preparations of calomel, much used in England, are given in doses either purgative or alterative. In the first case, ten or twelve grains are given in a single dose; in the second, according to the practice of Law, a demi-centigramme (one-tenth of a grain) is given every hour, so as to excite salivation in the course of a few days. Mercurial frictions (one drachm to one ounce daily) are likewise employed for the same purpose. There is no accurate work which establishes the nature of the influence of the medicines. In the country where they are used they are sanctioned by tradition, but by no experience which has confirmed their effects in a vigorous manner."†

M. Jules Guérin has attempted to cure hydrarthosis by the exhausting action of a syringe. He introduces a flat trochar to which a pipe admits of being accurately fitted; and having removed the fluid, irritates the inner surface of the membrane by rubbing against it the extremity of the instrument. Bonnet, who tried the practice, found that, although no inflammation ensued, the collection of fluid speedily returned.

The subcutaneous section of the cyst recommended by Professor Gerdy in the treatment of bursæ, and transplanted by M. Goyard, of Aix, to that of hydrarthroses, may, from the experience of MM. Malgaigne and Bonnet, be practised with safety; but there is a great tendency to return of the disease.

But the treatment to which attention has of late been specially turned, is that of injection as performed by Gay in 1789, and by Jobert in 1830. The use of iodine was first tried by MM. Velpeau and Bonnet, and to them is due whatever merit the system of injecting a joint with an irritating fluid may acquire. Before we reject the practice, which we have been taught to regard with fear, let it be remembered that iodine may be safely injected into the cavity of a chronic abscess, the cyst of which is quite as vascular, perhaps even more so, than the synovial lining of a joint. M. Velpeau uses the tincture of iodine, diluted with one or two parts of water; Bonnet, in his first trials, used the tincture of iodine pure; of late he has tried the following formula:—Water, 16 parts; iodine, 2 parts; iodide of potassium, 4 parts. M. Barrier prefers equal parts of tincture of iodine and camphorated spirit. The fluid is allowed to remain in the joint about five minutes, when it may be wholly or only partly abstracted. MM. Bonnet and Barrier prefer leaving some in the sac. Bonnet confesses, although he recommends the stronger fluids, and especially that of M. Barrier, that severe inflammation may immediately ensue; and that once the consecutive tension became so great, t he feared he should be obliged to reopen the ovial cavity to let out the effused fluid. He ies, however, that there are any real dangers he practice be followed with proper precauns; and MM. Velpeau, Jules Roux, Malgaigne, l Barrier have published cases supporting this ourable opinion. It has been tried, also, in s of ulceration of the cartilages, and here h no success, the fluid remaining unabsorbed. When the joint is sound, it appears, from the section of a knee in which this treatment had n successfully employed by M. J. Roux,* that constituent parts retain their perfectly normal earance. There were no fibrous bands of esion, as once presumed by both Bonnet and lpeau. The iodine had, after momentarily iting inflammation, altered the vitality of the mbrane; fluid ceased to be effused in excess; l the limb regained its former freedom of vement.—*Mr. Holmes Coote in Brit. and For. d.-Chir. Review.*

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* Traité des Maladies des Articulations, tom. i. p. 50.

† Bonnet, op. cit., p. 123.

*Extraction of Foreign Bodies from the Œsogus.*—M. Nelaton has collected with care various modes of procedure for the extraction foreign bodies arrested in the œsophagus, and in particular examines the mode of extracting ı-hooks, the removal of which is a matter of at difficulty. In speaking of œsophagotomy, s skilful surgeon proposes a proceeding, which, ording to him, is simpler than any other opeion. Instead of making a lateral incision, M. laton divides the integuments in the median e, as is done in tracheotomy, but making a re extended incision: he then separates to the ne extent the sterno-hyoid muscles, so that y can be drawn apart by blunt hooks, or, if essary, divided transversely, in order to give re space: that done, the isthmus of the thyd body is laid bare; beneath it is passed a nt needle carrying a double thread, in order t two ligatures may be applied: between the o ligatures the isthmus of the thyroid is diled. The trachea being thus laid bare, the left e of the thyroid is separated from it by a blunt trument, keeping at the same time close to trachea; at the bottom of this cleft, between trachea and thyroid, the œsophagus is nesarily found, and is to be opened in the ordiry way. By acting thus, all risk of wounding large vessels of the neck is avoided, and the ration may be performed without injuring thyroid arteries.—*Elements de Pathologie irurgicale,* tom. iii., Paris, 1854.

*Amputation of the Tongue.*—"CASE.—Dr. J—, responding member of the Academy of Medine, and President of the Committee of Vaccition, had been for several years in the habit sending to the Departments liquid vaccinetter, preserved in small tubes. The matter s put up by himself, and, as a consequence, he had been in the habit of holding a certain number of glass tubes in his mouth. The sharp points of the glass induced punctures on the tongue, frequently followed by small pimples. The pimples would generally disappear in a few days; but, in time, an induration supervened, and became, by its persistence, the origin of a grave disease. In fact, tormented by the persistence of the induration, Mr. J. endeavoured to remove it by cauterization. He first employed nitrate of silver; then, acid nitrate of mercury; but this medication aggravated the disease, instead of arresting its progress. Epidermic tubercles were developed all over the surface of the tongue, and subsequently a deep ulceration invaded the central part of the organ. By the advice of friends, he submitted to the energetic cautery of red hot iron; an operation which had the effect of giving still greater activity to the disease. All the anterior part of the tongue, nearly as far as the calciform papillæ, became the seat of ulceration; while, at the same time, the central ulcer was making rapid progress. To these symptoms were soon added lancinating pains, which entirely deprived the patient of rest. He consulted Dr. Ricord, who submitted him to the iodide of potassium. Despite this treatment, the disease gained daily; the tongue, enormously tumefied, ended by obstructing the buccal cavity; the efflux of saliva was continuous; speech became impossible, and the patient was compelled to restrict himself to liquid aliments. It was in these conditions, that, by the advice of Dr. Ricord, the patient came and consulted me. In the presence of a disease of such gravity, against which the most rational medication had been found powerless, I believed myself justified in proposing amputation as the only resource. It was performed on the 24th of August, at Dr. Pinel's *Maison de Santé*, in the presence of Drs. Larry, Ricord, Richard, Dumolet, Lauglebert, and Pinel. The patient having been submitted to chloroform, I first incised, on the median line, the lower lip and the soft parts of the chin. Next, with a chain saw, I made the section of the lower jaw; the two branches of which being thus separated, I was enabled to grasp the tongue, and draw it out. By a rapid dissection, the diseased organ was then separated from the healthy parts, as far as beyond its anterior half, and over an extent of one inch. The sublingual gland had also to be sacrificed. Ligatures were applied upon the important vessels, so as to prevent hæmorrhage. After this operation, the branches of the jaw were brought together, and maintained in contact, by means of thread rolled round the incisor and canine teeth; the ligatures placed upon the vessels were directed under the chin, in the inferior angle of the chin; and the edges of the division were united by means of the twisted suture. Notwithstanding the extreme gravity of this operation, no accident resulted. The union of the external parts was effected by first intention; the enormous loss of substance was rapidly repaired; the bones became consolidated; and what is remarkable, forty days after the operation, the patient had recovered his speech, and the faculty of seizing and masticating his food. On examination, the tumour was found to belong to the class of epithelial cancroids."—By M. Maisonneuve, *Gazette des Hôpitau x.*

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* Gazette Médicale, 1849, p. 618.

*Cases of Hypertrophy of the Tongue.*—Mr. Humphry relates a very interesting case of hypertrophy of the tongue cured by operation, notices others which have occurred, and sums up the literature of the subject. The following extract embodies the principal points of interest:—

"From the cases above mentioned, and those described by other writers, all of which present great similarity in their general features, we learn that the disease is one of sufficiently definite character to merit special notice. Though it sometimes originates in an inflammatory affection, it often appears to be independent of any such cause. It commences usually in childhood or early infancy, or is congenital. If it be early attended to, it admits of an easy cure by compression. If it be allowed to take its course, the prolapsing organ increases; at first, in greater proportion than the growth of the child. After a time it would appear to become stationary, or to grow only with the growth of the body, for in none of the cases, even those in which the deformity had existed for many years, had the tongue attained to greater size than one's fist..... Spontaneous cure rarely, if ever, takes place after the prolapse has been established. The operation of removal is not attended with much danger, and the remaining portion of the tongue shows no disposition to enlarge again." Mr. Humphry has collected altogether twenty-five cases; six of which were treated by pressure, seven by ligature, and twelve by amputation. In one case of ligature and one of amputation, the results were fatal; in all, the disease was cured. To these cases, Mr. Hodgson supplies another, successfully treated by ligature, and Mr. Teale another successfully treated by pressure.—*Brit. and For. Med.-Chir. Review, and Medico-Chirurgical Transactions.*

*Operation of Opening the Membranous Portion of the Urethra, in Retention of Urine from Enlarged or Diseased Prostate.* By James A. Lawrie, M.D., Professor of Surgery, University, Glasgow.—The cases in which it is impossible, without force, to pass a catheter into the bladder, in retention of urine from enlarged prostate, although not numerous, constitute in my experience the greatest number of examples of impossible catheterism. I have met with three such. One in hospital practice, ten or fifteen years ago; a second, in private, three or four years ago; and a third, in private, in the course of this summer. The first was punctured above the pubes, in my temporary absence, by my friend and colleague, Dr. A. Buchanan; the second I punctured above the pubes; and the third I relieved by the operation which I am about to describe. All proved fatal. Practical writers, in describing the methods of reaching the bladder in cases of impossible catheterism from diseased prostate, allude, as far as I know, to two methods only—puncture above the pubes, and forced catheterism through the prostate gland. Both are objectionable: the first is almost always a fatal operation, and the second sometimes causes dangerous hæmorrhage, or may condemn the patient to the uncertain use of the catheter for the rest of his life. Besides which, it is at times impossible, as happened in a case in the Infirmary here several years ago, in which every catheter tried bent in the forcible attempts made to thrust it into the bladder.

So far as I know, no proposal to puncture through the perineum in this class of cases has yet been made. Sir B. Brodie says, "it will be of no service here . . . . to make an opening into the urethra beneath the pubes." With all deference, this is the very operation which will be of service—it is one which I have taught for many years in my lectures, and which it is the object of this notice to recommend to my professional brethren. I shall describe the operation, and add a case in which it was performed.

The instruments required are, a common curved or rectangular lithotomy staff, a sharp-pointed bistoury or lithotomy knife, and a straight metal or elastic catheter. Before Dr. A. Buchanan invented his rectangular staff, I used the common curved staff, grooved on its under surface; but now I greatly prefer the former, taking care that the under limb of the instrument is not too long.

The patient being placed and tied as for lithotomy, the staff is introduced and held as for lithotomy, *i.e.*, pushed down upon the rectum, and the angle made to project towards the perineum. The point of the staff ought merely to reach the apex of the gland, or pass about half an inch into it. Hence the necessity for having the under portion of the staff short. The urethra is now to be opened by thrusting the knife into the groove of the staff, not deeper than merely to make sure that the canal has been opened, and immediately withdrawing it, making an incision just large enough to admit the finger. The finger being placed in the wound, a straight metallic catheter is introduced into the urethra, and lodged in its membranous and pervious prostatic portions. The staff is now withdrawn, and we have a straight catheter in a short straight canal, which a little gentle manipulation enables us to lodge in the bladder and relieve our patient. As it is of importance to have a thorough command of the catheter, I use one twelve inches long, slightly curved, and perforated at the point; the slight curve enables us to glide it under the arch of the pubes, and over a projecting third lobe, while the perforation at the point allows us to withdraw it over the probed wire, and to lodge and retain in its place a short elastic tube. The following will show that the above proposal is not merely theoretical.

Case.—Some weeks ago I was asked to see, in consultation, a gentleman upwards of eighty, and found him labouring under retention of urine of several hours' continuance. Before my arrival, a common sized catheter seemed to reach the bladder, but gave vent to blood only. Not having a prostatic catheter with me, and urgent engagements calling me elsewhere, I was obliged to defer farther attempts till the evening, when I completely failed to empty the bladder. As it was now late, and the patient was a little way out of town, it was agreed that I should return at six in the morning, and, if possible, reach the bladder by incision. I took Dr. A. Buchanan with me, who tried the prostatic and his compound catheter without success. I immediately performed the operation as above described, and with the utmost ease, and by the simplest possible operation, drew off a large quantity of bloody urine. The relief was great, but only temporary—the old gentleman sank, and died in about twenty-four hours.

Want of success in this case does not militate against the operation. Everything was against it—the great age of the patient, the previous repeated attempts to introduce catheters, the loss of blood from the urethra and prostate, and exhaustion, made recovery all but impossible. In similar cases, let careful, but not too frequent, attempts be made to pass the prostatic catheter, and if these fail, let the urethra be opened *at once* in the manner recommended, and I have no fear of the result.—*Glasg. Med. Jour.*

*Practical Observations on the Operation of Lithotomy.*—Mr. Crichton, the eminent Surgeon of Dundee, whose high reputation as a lithotomist is well known, in an admirable communication made to the *British and Foreign Medico-Chirurgical Review*, through Dr. Sharpey, offers the following observations:—

"Sir Astley Cooper says in his lectures: 'If the bladder is ulcerated, do not perform the operation on any account, for it will not be successful. But especially never submit a patient to the operation for stone if there be the slightest affection of the chest—the least difficulty of breathing—any sign of asthma, or any irregularity of circulation. No person who has any regard for the safety of his patient, or his own reputation as a surgeon, will ever operate for a stone unless the chest be free from all complaint. You hear of one surgeon being exceedingly successful in the operation for stone, and of another less so. The cause of it is this: the one is careful to select his cases; he puts aside all those who have any other affection, and tells them to wait, and only submits those to the operation who are free from any other disease.'

"Many practitioners are too ready to be swayed by such dicta, and, through fear of an unsuccessful result, allow their patient to remain unrelieved. But what is to become of patients suffering under stone, who happen at the same time to have these objectionable affections? Are they to be allowed to linger out a miserable existence in torture, without hope of relief, crying for death to put an end to their sufferings? For my own part, I have never been able to reconcile such doctrines with humanity or professional duty, but from the first have always operated on every case that presented, whether considered by others favourable or not. Neither have I found my professional reputation suffer thereby. On the contrary, I have, in various cases, experienced the satisfaction of seeing affections, which were considered insuperable objections to an operation, gradually give way after the pain and irritation occasioned by the stone was removed. A few instances, from amongst a number of others, will serve to illustrate this."

In illustration he gives nine cases, one of which we quote:—

"Case IX.—John Simpson, æt. 38, a poor, emaciated, ghastly-looking object. I was informed that he had been suffering more or less for seven years under the usual symptoms of calculus vesicæ; that latterly his sufferings had become so urgent as to disable him for work; and for some time past he had been unable to leave his bed—that he had been seen and examined by several medical practitioners, who could not detect any appearance of stone, and had all given their opinion that the urinary organs were all in a diseased state, for which there was no cure, and which could only be palliated by opiates and other sedatives. I sounded him, and, after some little search, distinctly struck a stone towards the right side of the bladder. Upon afterwards repeatedly sounding him, along with other professional gentlemen, the calculus was invariably found at the same place, fixed and immoveable, which led to the conclusion that it must certainly be partially encysted. Having previously met with cases of a similar nature, and experienced much difficulty and delay in getting the encysted portion disentangled, it became a matter for consideration how far, in his worn-out and almost moribund state, an operation should be had recourse to, lest he should die amongst our hands. Upon the matter being explained to him and his wife, he faintly replied, by all means relieve him, if possible, of his unbearable sufferings, whatever might be the consequence. Accordingly, on the 16th May, 1844, an opening was made into the bladder in the usual manner, and the presenting part of the stone quickly grasped and extracted by the forceps, broken off at its slender neck; but it was not without much difficulty and perseverance that the encysted portion was disentangled from its pouch, which was at length, however, safely accomplished, chiefly by cautiously introducing a female grooved staff through the narrow aperture, and gently and gradually making it find its way by the side of the encysted portion till it reached its base, supporting the poor man from sinking during the while by frequent sips of brandy and water. He made an excellent recovery; and by means of nourishing diet, with a moderate supply of wine and ale, he soon regained his strength and flesh.*

"The above few cases, taken indiscriminately from amongst many similar ones, may be sufficient to show that neither the safety of the patient nor the reputation of the surgeon has been compromised by listening to the dictates of humanity and professional duty. In justice, however, to Sir Astley Cooper, and others, who maintain that only select cases should be submitted to an operation, I shall now instance a few cases wherein the operation, although successful in itself, failed in also removing the accompanying objectionable affections."

Here, with a degree of honesty and candour much to be admired, and well worthy of imitation, Mr. Crichton details six unsuccessful cases. He further observes:—"During threescore years' practice, operating upon about two hundred patients from two to eighty-five years of age, it is now a cheering reflection, and for which I cannot be sufficiently grateful, that with the exception of the six cases already made particular mention of, who died at shorter or longer periods afterwards, in consequence of concomitant organic disorders of the head, thorax, or pelvis; and eight other cases, accompanied with similar organic affections, not considered necessary to particularise here, every one else of the whole number, many of them, too, of a very unfavourable character, made excellent cures."

*On Stricture of Urethra; Treatment by internal lateral Incisions.*—1. M. Maisonneuve has lately employed a mode of dividing strictures of the urethra from *within outwards*, which differs but slightly in principle from methods already in use. The instrument, however, differs materially. It consists of a *bistouri caché*, or of the lithotomy knife of Frère Côme, somewhat modified to suit its new office. The new urethrotomy knife is longer, more slender, and bent sideways; the sheath is smaller and cylindrical, especially at its free end. The hinge and handle are so arranged that, with the thumb, the blade can be projected from the side at pleasure. The instrument is introduced through the stricture with the blade concealed, and is then withdrawn with the blade projected, so as thus to divide the walls of the urethra at the seat of stricture. The incision is recommended to be lateral, and to be made on both sides.

It will be seen that this operation resembles very closely in principle the numerous improved methods of dividing the stricture internally, which followed on the publication of Mr. Stafford's paper on the 'Lancet-stilettes;' methods, we mean, in which the urethral walls are divided by a cutting blade, or blades, projected from a tubular instrument, and so withdrawn after this latter has been passed through the stricture. These M. Maisonneuve calls urethrotomy from *behind forwards*, and his own method from *within outwards*. Certainly, the distinction appears to us more verbal than real; and the cutting stilette is as neat and manageable as the new urethrotome.

M. Maisonneuve insists on the value of this mode of dividing a succession of constrictions, and remarks that perineal abscess does not follow the operation if the incisions be lateral, and not on the middle line downwards.—*Br. and For. Med. Chir. Review, and Bulletin General de Therapeutique.*

*Moveable Kidney.*—Although the following cases of this lesion (luxation of the kidney of M. Rayer) are to be regarded with some degree of scepticism, inasmuch as the diagnosis has not been verified by post mortem examination, yet they are of interest, since, in the diagnosis of abdominal tumours, it is of importance to bear in mind the possibility of such an occurrence taking place.

A woman was lately admitted to the Hôpital de la Clinique, under the care of M. Nelaton, presenting an example of a rare lesion, yet one of importance to be acquainted with, not only in order that the practitioner may avoid error of diagnosis, but the patient treatment at once inconvenient and useless.

This woman had for some time experienced pains in the abdomen of an ill-defined character, and varying in intensity from time to time. One day, while examining this region with her hand, she discovered the existence of a tumour in the left hypochondrium. Up to this she had not much minded her symptoms, but this discovery rendered her very uneasy. Very anxious, and fearing lest her case were serious, she consulted a physician, who, sharing her anxiety, prescribed divers energetic resolvents. Having undergone active and painful treatment (blisters, moxas, &c.), without any good result, the patient determined to come to hospital. On making an attentive examination, M. Nelaton discovered in the left hypochondriac region a tumour, moveable, floating, and in short, displaced in every direction with great facility. The absence of any trace of cancerous cachexia, and the good ste of the patient's general health, were opsed to the supposition that the tumour dended on degeneration of the epiploon; a tuour of the spleen would have been more adherent d more voluminous, besides percussion left no ubt as to this point, for on withdrawing the mour this organ was still found in its normal sition.

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* "Fusible calculus, with uric acid."

This tumour was then formed by the kidney; ut on the other hand no symptom indicated any sion of the functions of this organ. The conusion come to, therefore, was, that the case was ne of displacement of the kidney, first made ention of by M. Rayer, who described it under e name of moveable kidney, or luxation of the idney.

A case very closely similar has lately occurred the service of M. Velpeau, the subject being young woman twenty-three years of age.

He observes concerning it:—" This tumour is othing more than a kidney moveable in the abomen; it is well known how frequent are anoalies in the position of this organ; sometimes is placed in front of the vertebral column, metimes it descends into the pelvis, occasionlly being extremely moveable, passing in fact nto every part of the abdomen.

" I have seen at least seven or eight examples f it; but beyond all comparison the most rearkable case of this affection that I have met ith is in a physician in Paris. Against this mour, which caused him great disquietude, he d directed all sorts of treatment, and ended by aking himself really ill from fear and remedies mbined. M. Rayer saw him along with me, d we had much trouble in persuading him at it was a simple anomaly and not a morbid ate; but once convinced, he gave up all meditation, and rapidly regained his former good ealth, without, as may be imagined, the disapearance of the tumour.

" In such cases it may be advisable to recomend the use of a girth to support the abdominal rietes, and combat the feeling of weight that e patient sometimes experiences."—*Gazette s Hôpitaux.*

*Stricture of Urethra.*—Mr. Thompson, in his ery valuable treatise on the pathology and treatent of stricture of the urethra, closes with the llowing conclusions:—

" 1. That the process of dilatation, carefully nd perseveringly employed, is the most safe, fficient, and generally applicable of all means r the treatment of organic and permanent stricure.

" 2. That while it is successful in curing the ajority of cases, there are unquestionably some which either the effect is so temporary that e contraction reappears on the cessation of the reatment, however long continued, or in which e urethra is so irritable that its employment ggravates rather than removes the symptoms.

" 3. That the nitrate of silver lightly applied is sometimes useful in the last-named cases, inasmuch as it exerts a salutary influence upon the diseased surface of the urethra, relieving inordinate irritability, and checking undue vascularity and disposition to hæmorrhage, as it does in similar conditions of the skin and mucous membrane in other parts of the body, and thus it is a useful adjunct to dilatation.

" 4. That the potassa fusa, as a caustic, is considerably more active than the preceding, and is therefore more dangerous of application. If used at all, it should be applied only in very minute quantities, inasmuch as it is exceedingly difficult to limit the action of so powerful an escharotic, and apply it as a solvent only. It appears occasionally to aid the process of dilatation in the reduction of some strictures, probably by facilitating the solution of their component tissues, when care is taken to employ it in obedience to the condition just named.

" 5. That no agent should be employed in any case for the purpose of making an eschar or slough in the urethral canal.

" 6. That internal division is applicable only to strictures which are situated in that part of the urethra which is anterior to the bulb, and which have been found to resist dilatation.

" 7. That the distance at which a stricture is situated from the orifice, and the extent to which it implicates the canal, may be so great as altogether to forbid the practice of internal division, for the operation becomes more hazardous, just in the ratio of the extent of the stricture, and extent becomes more formidable in the ratio of its distance from the external meatus, so that it is a far easier proceeding to make internal division of a large portion of contracted urethra, situated in the anterior part of the spongy body, than of a small portion at the bulb or behind it.

" 8. That dilatation having failed after an ample trial, the stricture being permeable and situated near to the junction of the bulb and membranous portion (a spot already seen to be the most frequently affected), external division made from the perineum upon a grooved staff is for most such cases a safe and efficient mode of treatment.

" 9. That when the urethra is impermeable, every available means having been patiently and perseveringly employed to pass a catheter through it, but without success, the perineal section may be performed as a means of cure.

" 10. That when it is necessary to make an artificial outlet to relieve retention of urine, an operation may be performed for the purpose of curing the stricture at the same time, but if the condition of the patient require the proceeding employed to be as simple as possible, puncture of the bladder per rectum is indicated, unless the urethra be dilated in the perineum, when the making a single puncture there will be the best operation to perform.

"11. That it is a matter of great importance in the treatment of old or severe strictures, in relation to the mode of treatment employed, to ascertain what degree of organic renal disease exists as fully as our means of observation enable us, inasmuch as its presence renders *all* operations upon the urethra hazardous, and, for the most part, in a degree corresponding with the extent to which the renal organs are implicated.

"12. That since few permanent strictures exist which are not considerably influenced at some time or another by the occurrence of inflammation or congestion in the parts around, or by the action of spasm in the adjacent muscular tissues, either separately or conjointly, treatment may be always most advantageously directed to the improvement of the general health, to the subduing of local congestion, and to the removal of those sources of irritation, whether in the urine, in the urinary passages, or in some other and more distant parts, which have been pointed out as liable to excite the phenomena referred to."

*Operation on the Subclavian Vein.*—The following case, which appears to be well authenticated, is, to say the least, truly remarkable, and shows what nature can do at times:—

"Edward T. Hinckley, of Wareham, Mass., then mate of the barque Andrews, commanded by James L. Nye, of Sandwich, Mass., sailed some two years and a half since (we find the date omitted in our minutes), from New Bedford, Mass., on a whaling voyage. When off the Gallipagos Islands, one of the hands, who had shown a mutinous disposition, attacked Captain Nye with some violence, in consequence of a reproof given him for disobedience. In the scuffle which ensued, a wound was inflicted with a knife, commencing at the angle of the jaw, and dividing the skin and superficial tissues of the left side of the neck, down to the middle of the clavicle, under which the point of the knife went. It was done in broad day, in presence of the greater part of the crew; and Mr. Hinckley, the mate, being so near, that he was at that moment rushing to the captain's assistance. Instantly seizing the villain, and handing him over to the crew, the knife either fell or was drawn by some one present, and a frightful gush of *dark* blood welled up from the wound, as the captain fell upon the deck. Mr. Hinckley immediately thrust his fingers into the wound, and endeavoured to catch the bleeding vessel; with the thumb against the clavicle as a point of action, and gripping, as he expressed it to me, 'all between,' he found the bleeding nearly cease. The whole affair was so sudden, that Mr. Hinckley stated to me, he was completely at a loss what step to take. Such had been the violence of the hæmorrhage, a space on the deck fully as large as a barrel head being covered with blood in a few seconds, that it was evident, from that and the consequent faintness, that the captain would instantly die should he remove his fingers from the bleeding vessel. As Mr. H. said to me, with the simplicity and straightforward style of a seaman, 'I brought to for a minute, to think over the matter. The bleeding coming upwards from under the collar-bone, and being completely concealed by it, it was plain enough that I couldn't get at the blood-vessel, without sawing the bone in two; and this I would not like to have tried, even if I had dared to remove my fingers. Feeling that my fingers' ends were so deep as to be below the bone, and yet the bleeding having stopped, I passed them a little further downwards, still keeping up the pressure against the bone with the middle joints. I then found my fingers passed under something running in the same course with the bone; this I slowly endeavoured to draw up out of the wound, so as to see if it was not the blood-vessel. Finding it give a little, I slowly pulled it up with one finger: *when I was pulling it up, the captain groaned terribly*; but I went on, because I knew I could do nothing else. As soon as I could see it, I washed away the blood, and was astonished and very glad to see there were two vessels, as I supposed them to be, one behind the other: *the cut was in the front one*. It was the full breadth of the knife, or about half an inch, and neither across nor lengthways, but about between the two, and went about half its thickness through the blood-vessel: *it was smooth and blue* in appearance; and the cut had stopped bleeding, as I supposed at the time, because the vessel was pressed together by being stretched across my finger. As I had often sewed up cuts in the flesh, and knew nothing about tying blood-vessels, and supposed that was only done when they were cut in two, as in amputated limbs, I concluded to try my hand at sewing it up; so I took five little stitches; they were very near together, for the wound was certainly not half an inch wide, if so much. I twisted the ends together loosely, so as to make one large one, and let it hang out of the wound over the bone; then I closed all up with stitches and plasters. On the fourteenth day I found the strings loose in the wound, from which matter had freely come; it healed up like any other cut."—*American Med. Monthly.*

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## MEATH HOSPITAL.

### *Case of Albuminuria without Dropsy; Acute Inflammation of Serous Membranes, supervening shortly before Death; peculiar Deposit in Intestines.*

BY DR. LEES,

PHYSICIAN TO THE HOSPITAL.

**Anne Brady**, an unmarried servant, was admitted to the Meath Hospital, February 15, complaining of great thirst, debility, diarrhœa, and tenderness in the epigastric and right hypochondriac regions, with a sensation of general fulness in the abdomen. Her appearance was anæmic; there was a loud, continuous murmur in the jugular veins, and she was slightly jaundiced; the right hypochondriac and epigastric regions gave a dull sound on percussion, and were very tender on pressure. She stated that about three weeks previously she was attacked with rigors, sore throat, and diarrhœa, which she attributed to damp feet; and on the 14th she had a severe prolonged rigor. Her pulse was small and quick; skin dry and hot; tongue moist, coated with a very viscid secretion, and remarkably smooth, as if the papillæ had been shaved off. The urine was pale, neutral—deposited a whitish sediment of triple phosphate and phosphate of lime; sp. gr. 1·010, and highly albuminous; very deficient in urea, and exhibiting under the microscope casts of the tubes. There were no dropsical effusions.

19th. Had a severe rigor, followed by bilious vomiting.

25th. Another rigor (the fourth); great irritability of the stomach.

March 5th. A rigor.

7th. A rigor.

11th. Had two rigors this day.

16th. A severe rigor, followed by violent pain, and tenderness all over the abdomen, with a return of the bilious vomiting. She sank rapidly into a state of collapse, and died in a few hours.

On opening the abdomen, the intestines appeared glued together with greenish coloured lymph, and a quantity of seropurulent fluid was in the peritoneum; both lobes of the liver were much enlarged, the right firmly adherent to the diaphragm by scabrous lymph; the left extended across the epigastric and left hypochondriac regions, and was firmly adherent to the stomach by its under surface. The intestines were covered with small circular spots of white and brown colours, seated beneath the serous membrane. When examined under the microscope, they appeared formed by a white circle or deposit, then a brown circle, and then a white one again, forming a series of concentric circles, all situated between the serous and muscular coats, leaving the mucous coat untouched, no trace of ulceration being present. There existed intense acute inflammation of the pericardium, the external surface of the heart being highly vascular and covered with rugous lymph. Large patches of recent lymph were also found on both pleuræ, but no appearance of tubercular deposit in the lungs. The right kidney was large, lobulated, and very pale, the tubular substance nearly obliterated by the encroachment of the cortical on it, while the left kidney was greatly atrophied and indurated.

This case I consider to be of great importance and full of interest to the practical physician. It is one largely suggestive of things beyond itself, of new elements of disease, and new modes of morbid action. On admission, I first regarded her as suffering from subacute hepatitis, with tendency to the formation of hepatic abscess, indicated by the pain and tenderness, with enlargement in the region of the liver, this state having been preceded by, and accompanied with rigors; and the progress of the case appeared confirmatory of this view, as she had no less than ten rigors previous to her death. The condition of her urine, I confess, puzzled me, as I did not expect to find it pale, neutral, and containing phosphates, with such an amount of fever present; but I thought this might depend on the depressed state of her nervous system, which we know to be one of the most frequent causes of the phosphatic diathesis, and I considered that the local inflammation was, if I may so express it, but an episode in the general history of her case, and that it had not sufficient influence on the system at large, to display its ordinary manifestations. As to the presence of albumen in the urine, with the great deficiency in urea and the casts of the tubes, I considered these as the most important pathological facts in the case, for we know that their presence is always indicative of a very serious condition of the system, in which many and various secondary diseases are apt to arise, dependent on some general morbid condition of the blood; and a knowledge of this fact explained to us the supervention of inflammation of the peritoneum, the pericardium, and pleuræ, as also the persistence of the vomiting and diarrhœa. The presence of these symptoms may also account for the absence of any dropsical effusion, as well as for the freedom from any cerebral disturbance, which occurs towards the latter periods of most cases of albuminuria; for it is a pathological law, that when the secondary, or even sympathetic affections of any disease are well developed, the primary or real symptoms of the original disease are, for the most part, suspended or kept in abeyance. The tendency, in these cases of albuminuria, to the development of several secondary affections, is also a good evidence in support of the opinion as to the blood nature of this disease, tending to prove that it is not merely a disease of the kidneys, as some have wished to establish; for there must be some common agency by which these various secondary effects are produced, otherwise we could not explain how so many different parts could be almost simultaneously affected; for I consider that the inflammation of the pericardium and pleuræ came on but a short time before her death; as also the general peritonitis, indicated by the violent pain complained of, for the first time only, the night previously. As to the nature of the peculiar deposit seated between the serous and muscular coats of the intestine, I have never seen or read of any similar appearance, and must regard it as representing some degeneration, or anomalous form of exudative process, most probably of an albuminous nature, as I do not think it presented the characters of either the typhoid, or tubercular, or purulent form.

I have not dwelt on the treatment of this case, for, not wishing to expend my patient's strength by any active measures, I contented myself by palliating her most urgent symptoms.

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## RICHMOND HOSPITAL.

### *Clinical Lecture on the After-Consequences of Amputation.*

BY JOHN HAMILTON,

SURGEON TO THE HOSPITAL.

The first and most pressing danger after amputation is hæmorrhage. It may arise from half an hour after the operation to any number of hours or days, till union in the stump is effected. It is this that makes the surgeon careful to have his patient watched by an assistant always at hand. I cannot forget the anxious hours I have spent, when, a student like yourselves, I have been left to watch a stump after amputation. The suspended terror with which I have raised the sheet, from time to time, to see if blood was trickling down, or whether the bloody oozing, which always flows from the lips of a stump, was hæmorrhage or not. If the bleeding is only trifling, I would not have you interfere; compression on the face of the stump and the application of cold is often sufficient to check an inconsiderable bleeding, which your opening the stump would only tend to render a considerable one; but should the blood flow freely, the stump be swollen, and clots appear between the spaces of the sticking-plaster, you must open it forthwith, and search for the bleeding vessel. Before, however, the dressings are removed, firm pressure should be applied over the femoral artery, by a steady assistant. This is much better than the tourniquet; it causes the veins to become turgid and add to the bleeding, which sometimes even comes from the femoral vein itself. When you have no one to help you, there is no choice but to apply the tourniquet. Then carefully clean the face of the wound of the clots which you will nearly always see covering it. The blood will now be found to come in three ways:—first, in a general oozing from the stump. In this case, if there are one or two spots whence the blood flows with more rapidity, you may take up the vessels; but, in this general bleeding, it is best to cover the part with shreddy lint, and press steadily with your fingers on it for some time.

The bleeding will usually stop, or at least that bleeding which comes from small branches, temporarily increased and excited by the inflammatory action which has begun in the end of the amputated limb. Those of larger size will then be more readily found and secured. Then put together the sides of the wound with sticking-plaster, or compress and bandage, giving up all hope of union by the first intention. This was the kind of bleeding in the man in the house.

Two or three years since I amputated the arm of a man into whose elbow an abscess had opened. A few hours after the operation I was sent for by the resident pupil, in consequence of hæmorrhage. I found two intelligent young men hard at work tying vessels; but in vain had they tied six or seven; numerous others were pouring forth the red fluid, the loss of which was beginning to tell against the patient, an old man. I saw at once that it would be hopeless to attempt to stop the hæmorrhage by tying the numerous small vessels that were bleeding, but with small fuzzy bits of lint, applied closely over the bleeding surface, I perfectly succeeded.

A more serious hæmorrhage, though happily very rare, is from the femoral artery itself. This may occur early, from the slipping off of the ligature, from its not having been tied sufficiently tight;—or at a later period, when the ligature has been drawn off, but no proper clot or union exists at the end of the vessel. I may mention a case in my own practice, from the first cause.

I removed the leg above the knee from a man aged 45, in consequence of a carcinomatous ulcer. When I dressed the stump on the fourth day, half had united; the other half was painful, and discharged a good deal of shreddy matter. On the evening of the fifth day, he found himself bleeding. The resident pupil was, unfortunately, not at his post—he had gone to sup in college; the other resident, not being on duty, was out also, and before a gentleman came from the Whitworth Hospital, the man had bled profusely for ten minutes; and, though it was then stopped by pressure on the femoral, he never rallied, and when I arrived he was just dead. The resident pupil, otherwise an estimable young man, never forgave himself for this occurrence.

The third kind of hæmorrhage is from the femoral vein, and is sometimes very profuse. At the time of the operation there is occasionally troublesome bleeding from the femoral vein, which ceases on the slackening of the tourniquet and removal of the tourniquet bandage; or is readily restrained by putting a small compress of lint over the cut end of the vein. Most surgeons dislike applying a ligature round a vein, but if the other means fail this must be done. I removed the leg of a young man below the knee, for disease of the tarsus and ankle joint: on the twentieth day after the operation, when all the ligatures had come away for several days, he was seized in the middle of the night with violent hæmorrhage, not *per saltum*, but in a free flow, and of a dark colour. Pressure on the femoral artery did not stop it. All the stump had united except a small portion in the ham, which went like a large fistula high up, and from which the hæmorrhage came. Pressure over this part with lint saturated in a strong solution of alum and in turpentine, stopped the hæmorrhage, which, however, returned again and again, but was finally completely arrested by laying open the unhealed cavity from whence the hæmorrhage came, and laying the compresses over an ulcer in the popliteal vein, from which the blood was seen to flow.

The cut surface in amputation is almost always large; and in sudden accidents, in muscular men, or in fat women, the wound you have made, particularly in the thigh, is very extensive indeed. Sometimes the whole, except where the ligatures are, will unite by the first intention; this, however, you can expect to happen but seldom;—generally, the external or tegumentary lip unites, while the inside is still ununited, and discharges pus, which you should carefully and gently express.

The smaller ligatures come away about the tenth day; the ligatures on the larger arteries, as the femoral, humeral, or posterior tibial, after the fourteenth, or longer; I have known even a month elapse before the last ligature came away. You should at each dressing, after the eighth day, pull gently at the ligatures; some of those on the smaller muscular arteries come readily away; but I use the word *gently* emphatically, because I witnessed a rough tug at a ligature once bring on a very alarming hæmorrhage.

If the wound does not unite by the first intention, its progress is pretty much as follows:—for the first two days all goes on well, but the third day you hear that the patient has passed a restless night; he complains of pain in the stump, and his face is flushed, skin hot, pulse quick, and the tongue loaded. After removing the lint dressing, the stump appears swollen and red, and the bandage looks too tight; you slit it up and remove one of the strips of plaster, when the wound at once gapes, no union having taken place, and a quantity of thin, bloody matter gushes out; the patient complains of much tenderness, and can scarcely bear the gentlest compression by the sponge. Two things should be observed: first, not to put too many strips of plaster on, or too tightly, as room should be left for the matter to escape; and, second, not to put the bandage on too tightly, or it will cause much uneasiness: let it be applied merely firmly enough to give support.

Sometimes, however, matters are even worse. A woman, aged 40, of most intemperate habits, was admitted into No. 13 Ward, in a state of excitement almost approaching delirium tremens. Before admission she had had phlegmonous erysipelas, with extensive suppuration and mortification of the integuments and of the cellular tissue, so that the muscles were bared as if by dissection, and the ankle-joint opened into. There was an abscess in the other thigh, which I opened. She had been sent into the hospital to have the limb removed, but she was in such a miserable plight, that at first I refused to perform it. The pain, however, was so excessive, and she was so constantly crying out for God's sake to remove her leg, that I reluctantly consented, and under the influence of chloroform it was removed, without her being sensible of any pain. There was nothing particular in the operation, except a small drop of thick yellow matter was seen in the centre of the stump—I hoped not in the vein. The femoral artery and another vessel only had to be tied, and very little blood was lost.

Third day.—Rather better than before the operation. Slept some; pulse 120; tongue quite dry; a good deal of thin, fetid discharge; maggots very troublesome. The straps and bandages were removed, and not the least attempt at union was discovered. The lips of the stump were gaping; the whole surface yellow and flocculent; a great deal of yellow, turbid discharge; very tender.

On the eighth day she died, having gradually sunk. The surface of the stump yellow and sloughy; the integument quite pale, and deficient in action.

Another case will show, that in certain habits of body the chance of success from amputation is very small indeed, from nearly the same state of the stump.

Mr. S——, ætat. 60, while riding in the Park, was struck on the shin by the shaft of a car. After the first pain he thought little of it, and went about his business as usual. He was, however, that kind of man in whom even slight injuries can rarely be received with impunity: his habit of body was very full; his complexion rather sallow; he was affected with slight chronic bronchitis, and he lived too well every day, though not intemperately.

The bruised part inflamed, became black, and dead. The mortification spread, though very slowly, till, about five weeks after the injury, nearly the whole of the integument and cellular tissue at the lower half of the leg had mortified away; the muscles were stripped bare; the tendo achillis, peronei, and other tendons clear and bare; the ankle-joint open, and every now and then smart bleedings from open vessels; pulse 130; nocturnal delirium. Unless something was done, death was certain; this something was, of course, amputation. Was it advisable, or even justifiable? In consultation, Mr. Colles, Mr. Cusack, and myself agreed that it was the only chance, but a very bad one, indeed, and this we told the patient and the friends. They requested it might be done, and accordingly I removed the limb.

For some hours after the operation he was better than he had been; quite easy; spoke with hope about himself, and the pulse fell to 94.

This favourable state was of very short duration. Seven hours after he began to rave, and was delirious the whole of the night. On the third day, when I removed the dressing, there appeared no attempt at union; the stump pale and flabby, apparently with some fluid in it; and when I removed one of the centre straps of plaster, a large quantity of bloody serum, with a slight thickening, or apparent attempt at pus, gushed out. He either lay in a half-inactive state, or raved, and did not recognize any one, and he gulped up a little blood. The stump got a more sloughy look, and the discharge became more profuse—more like pus, but with a bad smell. He would sometimes recognize persons, and answer questions, but not to the purpose. His pulse rose to 140, and he died on the eighth day, a week after the operation, as in the former case.

In a case of bad compound fracture, with extensive suppuration of the leg up the thigh, in a man of forty-five, one of my colleagues took off the leg. The next day the man was odd in his manner, then delirious; the pulse 132; the stump became sloughy, and he died on the fifth day.

Another danger is from phlebitis. A man, of the name of Thornhill, while intoxicated, slipped off the pavement in Castle-street, which is very high, and suffered a comminuted fracture of the lower third of the leg. He was of a very full habit of body for his age, thirty-five, and accustomed to drink four or five tumblers of punch daily. His manner was nervous and excited, and he suffered much from pain in the limb, which it was considered advisable to remove. He died on the fourteenth day, no union having taken place in the stump, which was sloughy, and pus was found for five inches up the femoral vein.

From the foul state of the wards in the Parisian hospitals, the mortality from this last cause is very great—fifty, or even sixty, per cent., according to M. Malgaigre.

*The Bone.*—The usual course is for a lymphy exudation to cover the surface of the bone, which becomes adherent to the soft parts—this is when the greater part of the stump heals by the first intention; when it does not, the surface of the bone, particularly the cancellous structure, hrows up granulations, and union by the second ntention is accomplished. Finally, the end of the bone is covered by a firm, fibrous material, ts edges are absorbed, and it becomes conical. There is, however, trouble from the bone in two ways: first, the action of the saw sometimes seems to kill the sawn surface of the bone; and after the stump has refused to heal for a long ime, the centre remaining open and discharging thin matter, the bone can be felt hard and distinct at the bottom of the wound. At length it is perceived to be loose, and can, with a forceps, be withdrawn through the unhealed opening, or if not, an incision should be made, and it should be withdrawn. It sometimes presents a curious appearance; a perfect flat ring of exfoliated bone, about one-eighth of an inch or less of the end of the bone having become dead or separated entire. Another way is this: you see that the end of the bone is pressing against the upper part of the stump, and that the integument there is strained and tense in consequence; the bone being drawn upwards and forwards by the action of the psoas and iliacus muscles, while the soft parts are drawn downwards and backwards, partly by their own weight and also by the powerful traction of the hamstring muscles. You will best counteract these forces by putting a splint of wood, either flat or scored, at the under and back surface of the limb, with a well-applied bandage, and the tension against the end of the bone is at once relieved. If you do not do this or it does not answer, the part against which the end of the bone projects and presses becomes white and glossy, then red and painful and very tender, then fluctuates, and finally ulcerates, and the end of the bone can be felt with a probe; but though you would think the bone would exfoliate, it generally does not, but unites by granulation with the neighbouring parts, and all goes on well. A stump that unites by the first intention, or, at least, that heals soon, is much more likely to be a good plump one; when the healing is tedious from unhealthy action or diseased bone, no matter how well the operation has been done, the stump will be conical.

Now, with regard to the nerves I have not much to say—they rarely give any trouble. Nerves in a stump are, as was ascertained long ago by Mr. Langstaff, found, after the lapse of some time, to have bulbous extremities. This, I may observe, seems to be the case when nerves have been divided from other causes. In a case of caries of the petrous portion of the temporal bone, where the portio dura was destroyed and completely divided, as it passed through the carious spot, the divided end of the nerve next the brain was bulbous, the end of the distal portion not so.

If, therefore, you find, as in these plates and preparations, the ends of the nerves in an old stump, ending in bulbs, you are not to consider them as diseased; nor if any pain has been felt, that they are the cause of that pain; nor can I say that the cases where they have been removed by operation have been satisfactory. Stumps are usually not very sensitive; but occasionally, from a constitutional, I believe, rather than from a local cause, the most violent pain is experienced,—a pain, apparently the most intolerable, and resembling tic-dolouroux—absent for a time, but returning in paroxysms of dreadful severity.

The case of the Marquis of Anglesea, whose leg was amputated at Waterloo, will be familiar to you: nothing that was tried gave him any permanent relief. The great Nelson, also, suffered from this nervous affection, after removal of the arm above the elbow, and many years of his life were rendered miserable by it. Southey's account is as follows:—"His sufferings from the lost limb were long and painful,—a nerve had been taken up in one of the ligatures at the time of the operation; and the ligature, according to the practice of the French surgeons, was of silk, instead of waxed thread. This produced a constant irritation and discharge; and the ends of the ligature being pulled every day, in hopes of bringing it away, occasioned fresh agony." This is true. I happened to meet, some years ago, the surgeon, who performed the operation. He told me that he had included the median nerve in the ligature of the brachial artery, but that the operation was performed under great difficulties,—a heavy fire and great rolling of the ship, as it blew hard at the time. We can scarcely include among the morbid after-consequences, that curious deceptive feel which remains so long after a limb has been removed, that it is still on, and that the fingers or toes still move. This feeling extends, unhappily, to previously morbid sensations also. I recollect having seen a man who, twenty-five years ago, had the leg amputated below the knee. He had five years previously wounded the sciatic nerve with a chisel; besides a loss of sensation and motion in the outside of the leg and foot, and of the sole and inside of the foot, also, he used to suffer shocks like "when the funny-bone" is struck, going down the whole limb, when the root of the penis or scrotum, or back of the upper third of the thigh were touched. At the end of the twenty-five years he still occasionally felt the same sensation in the *absent* part.

A very rare result of amputation, indeed, is epilepsy. I have only met with one case, where the arm was removed below the elbow for scrofulous disease of the wrist. There was severe secondary hæmorrhage, but all ligatures had come away for several days, when he was seized with a very violent epileptic fit, followed by several slight ones. As the aura began in the left foot, perhaps the occurrence of the epilepsy was merely a coincidence. Professor Smith, in exhibiting to the Pathological Society some bulbous nerves that he had dissected from a stump, remarked that he had seen a case where amputation had been followed by epilepsy.

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## Cases of Cerebro-Spinal Arachnitis, their Complications and Sequels.

By DILLON KELLY, M.R.C.S.I., Mullingar.

Miss C., æt. 23 months, a most precocious child, was seized suddenly on the 4th of June, 1846, with retching, which continued for about an hour, then fell asleep, but awoke in the night with an intensely hot, dry, burning state of skin, unquenchable thirst, and pain in the head, accompanied by repeated fits of screaming.

The next morning her face was flushed, head and skin hot and dry, pupils dilated; conjunctivæ muddy, yet eyes bright and shining; pulse about 150, lateral decubitus, with head thrown very much backwards, and rigidly fixed in that position; spine, also, curved backwards; whole surface so excessively sensitive, that she could not bear the slightest handling; abdominal parietes partly rigid.

Her head was shaved, and kept cool by pounceing with warm water; leeches applied over the tract of the cervical vertebræ, immediately beneath the occiput; calomel and James's Powder every sixth hour, and purgative lavements.

On the tenth day the normal position and mobility of her head was restored, and on the sixteenth she was convalescent, when it was accidentally discovered that her left leg, from the knee downwards, was incapable of motion.

Stimulating liniments, blisters, and electro-magnetism, by the advice of Sir P. Crampton, and under the immediate direction of Mr. Clarke, were had recourse to, but the paralysis is permanent.

May 6th, 1850.—John Patten, æt. 12, rather a weakish looking boy, but up to that date quite healthy, after playing at foot-ball in the evening, and eating a hearty supper, was attacked shortly after getting into bed with retching, accompanied with intense pains in the head and stomach, thirst, hot skin, and restlessness.

To these succeeded retraction of head, curvature of spine, slight rigidity of upper extremities, convulsions recurring, first at longer, then at shorter intervals, but becoming, as the disease advanced, more frequent, till at length they were all but continuous, and death on the fourth day.

Calomel and James's Powder, leeches, blisters, lavements, and mustard poultices to the feet, was the treatment.

June 1st, 1852.—A. B., æt. 13, an inmate in a charitable institution; unwell since Sunday, the 30th of May; on which day he first complained, about noon, of pain in his head; in the evening his throat became sore, next day he could scarcely swallow; during the night, had three or four convulsive attacks, and another in the morning some short time before I saw him.

When first seen at 9 A.M., I was at once struck with the comparatively large size of his head, and the prominence of his occiput. I also remarked, that he had the cicatrix of a recent cut of small size in the centre of his forehead; he was lying on his right side, head thrown back, and forming an angle of, at least, 110 deg. with the trunk; lower extremities slightly bent and rather rigid; abdomen soft and normal; bowels free; pulse 90, rather small and compressible; countenance natural; no heat of scalp, no headach, no pain in the region of the diaphragm, no want of symmetry, or dilatation of pupils, no appearance of distress, so far as the face proper was concerned, if we except a just perceptible risus; consciousness unimpaired.

Complains much of severe pain in the space between the rami of the lower jaw, immediately anterior to the submaxillary glands, also of great difficulty in swallowing, and soreness of throat, cannot open his mouth beyond an inch, from "the soreness and stiffness of his jaws," together with a sense of pain, referred to the abdomen, when he makes the attempt.

Looking into his mouth, so much of the velum as could be seen was perfectly normal; but his breath had the peculiar fetor of one labouring under sore throat; but, in reality, the fetor peculiar to exhaustion, when dependent on want of innervation, and generally present in those cases where irritation or injury of the spinal cord excites and continues its polarity; no swelling of the parotids, but a just perceptible enlargement and soreness of the submaxillary glands.

The Rev. Mr. R. had very judiciously given him two grains of calomel every three hours; he had also applied a blister to his throat, and had a turpentine lavement administered.

I removed the blister, which was on for about eight hours, and had a linseed meal poultice applied over its site, and directed the calomel to be continued, and the vapour of warm water inhaled every hour.

1 P.M.—Had three convulsive attacks since morning visit; head more retracted; curvature of spine more pronounced; lower extremities rigid; total inability to swallow; pulse falling, but if anything not so compressible; abdominal muscles hard, rigid, and slightly convex, partial priapism.

Pressing over the region of the bladder, to ascertain the state of fulness of that viscus, considerable uneasiness, amounting to pain, was complained of, and almost immediately followed by a return of the fit.

It commenced with a slight frown, to this succeeded perceptible flushing of the brows, colour dark red, then intense flushing of the cheeks, which gradually darkened in hue till the whole countenance, which then became frightfully swollen, assumed a turgid, leaden violet appearance, and decided tetanic expression.

Filtrum not only obliterated, but curved outwards superiorly, and bounded inferiorly by a hollow, parallel to the mucous membrane of the lip; eyes staring; pupils dilated to a ring; tongue protruding through the teeth, which were about the eighth of an inch apart; head retracted to fully an angle of 90° with the trunk, opisthotonous, and so exaggerated, that the back and extremities formed an arc curved fully to 130°.

Extreme trachelismus and laryngismus; bubbling of frothy saliva through the compressed lips; in fact, all the symptoms indicative of intense venous congestion of the brain and suffocation were fearfully and but too truly developed.

Recovering from that frightful attack, his consciousness was almost at once restored; his pupils not only contracted freely, but again resumed their normal condition; he not only answered questions pertinently, but clearly; and to test his sight, he read at once the heading of a small book of hymns, and when asked if he knew any of them, said almost the whole, which was correct.

In a few minutes more, and whilst adjusting the poultice on his neck, another paroxysm developed itself, then another and another, in quick succession, each one more fearful and protracted than the preceding, and then a fourth, under which he sank, after one of the most frightful and melancholy convulsive struggles I had ever the misfortune to witness, just forty-five minutes after I had entered the dormitory.

The most important feature in this case, and one which should make the profession extremely cautious, even in their manipulations in convulsive diseases, was, that the slightest attempt at examination invariably developed an attack.

The order seemed to be a sudden rush of blood to the head; to this succeeded spasm of the muscles, productive of trachelismus, which preventing the return of blood from the sinuses, by the compression it exerted on the venous network of the neck, gave rise to a further state of compression and congestion.

The compression thus produced, in its turn excited a more intense degree of spasm, and involving the muscles of the larynx, complete closure of the glottis was the result; the bronchial secretion accumulated in the respiratory tubes, and the unfortunate patient (an *experimentum crucis* of suffocation) was "drowned in his own mucus" before your eyes, as effectually as if he had been "immersed, head downwards, in a water butt."

June 4th, 1854.—John Boylan, æt. 15 months, ill since the preceding Wednesday, presented the following symptoms:—Head thrown backwards to fully the extent of producing an angle of an hundred degrees with the trunk; spine slightly curved; skin hot and burning; sensibility of surface so excessive, that the slightest change of position, or the most stealthy attempt to ascertain the state of the pulse or abdomen, caused him to scream out violently.

Thirst; constant retching; frequently screams in his sleep, wakening up with a wild, frightened, and staring expression; pupils partially dilated; head hot. Spinal column excessively sensitive to the slightest manipulation; left arm apparently incapable of motion.

Hydrarg. cum creta et Pulv. Jacobi, three times a day, and a belladonna liniment applied on the spine, appeared to give relief. On the tenth day partial use of the arm was restored; and on the sixteenth he was convalescent, but with strabismus of right eye.

*Remarks.*—Those cases present terminations of a most instructive and interesting character, indeed, considered either with respect to their complications, their sequel, or their diagnosis. Of their pathology I can say nothing, from the difficulty of obtaining post mortem examinations in the country, a hiatus *haud maxime deflendus*, as the valuable paper of Dr. Mayne, in the fifth volume of the *Dublin Journal of Medical Science*, not only supplies the deficiency, but has completely exhausted that subject.

In the first complicated case, that of Miss C., the lesion is one obviously of a principal branch, the tibial; in the fourth, that of John Boylan, some of the fibrils of the third or sixth only are affected, yet, in neither does the slightest disturbance whatever exist to indicate that either the brain or spinal cord is at all implicated in those sequels. Then, in the complications, convulsions were absent, if we except a fixed state with evanescent rigidity, somewhat akin to the *petit mal* of the French, and observed once or twice in the case of John B.; whilst in the pure or uncomplicated they were always present, and would appear not only to be pathognomonic of the disease, but also the last act in the melancholy tragedy.

Again, in the complicated, recovery appears to be the rule, but with permanent local lesions of grave character; whereas in the uncomplicated, death, paradoxically enough, may be considered their natural termination, as up to this period I believe there has been no recorded case of recovery from an attack of pure cerebro-spinal arachnitis.

The age of the patients, too, appears to exert considerable influence over the disease; those of tender years developing complications evidently modifying the attack, and recovering, yet imperfectly; whilst, in those more mature, the malady assumes its true type; the cerebral and spinal centres are irreparably involved, spasms of the glottis and diaphragm succeed, and convulsions become developed, till, after repeated recurrences, and hair-breadth escapes, the unfortunate patient, completely asphyxiated, at length succumbs to the attack.

In the formation of a diagnosis, too, these complications are of the most paramount importance to the practitioner, for, so far as those I had the misfortune to witness go, they prove that atrophy, or it may be death, of some of the principal branches or fibrils of a nerve, and the consequent paralysis of those parts to which they are distributed, are, under the most favourable circumstances, the results we are to anticipate in those truly pitiable and unfortunate cases.

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## Case of Traumatic Tetanus successfully treated by Chloroform.

By ROBERT HANNAY, M.D., Lurgan.

On the night of Tuesday, the 27th of June, I was called to visit Jemima Heatley, aged eleven years, whom I found suffering from traumatic tetanus. On the 10th of June she had received a wound on the right heel, from a cart-wheel passing over the part. When I saw her the wound was about four inches long, extending from a little below the one malleolus to the other, over the tendo achillis; and the child's father described the wound as having been such, that the skin was turned over upon the sole of the foot, and said it had been replaced and kept *in situ*, by stitches.

On the 27th, when I first saw her, she was restless and thirsty; her skin hot; pulse 96. She lay upon her face and knees; her tongue was much bitten and bleeding, and her face swollen, having had frequent attacks of opisthotonos, the spasms affecting principally the muscles of the spine, neck, and jaws, in attempting to open which she generally bit the tongue severely. Her mother informed me that these spasms had commenced on the 23rd, with a stiffness of the neck, which gradually became worse, until the 26th, when the child was seldom free from spasms for more than ten minutes at one time. And as every attempt at motion, or taking food or drink, brought on a fit, she latterly lay with her face under the bed-clothes, and had a wedge of wood kept in her mouth to prevent her wounding the tongue, which was always protruded between her teeth whenever a spasm was commencing.

I gave her two grains of opium, and left a number of one grain opium pills with her mother, desiring her to give the child one every fourth hour until she procured sleep, and to apply a large poultice of bread and water to the wound. I also had her back and epigastrium rubbed with a liniment composed of chloroform ʒiv., laudanum ʒiv., and tincture of soap and opium ℥j.

28th June.—On visiting the child about seven A.M., I found that she had slept for some hours, but had been awakened frequently with spasms, and still wounded her tongue, if the wedge of wood by any chance got out of the mouth. I had the liniment reapplied, and pouring twenty drops of chloroform on a handkerchief, I held it over her mouth and nose; she made great resistance, but by persevering I succeeded in procuring the usual effects of the remedy, and when, after a few minutes, she opened her eyes, by again applying the handkerchief she soon fell into a deep sleep, in which I left her. About twelve o'clock her mother called on me, and said, that shortly after I left the child she awoke, but again fell asleep, and had continued so until near noon. In the evening I found her much more lively; the liniment was reapplied, and I desired her mother to have it rubbed over the back and abdomen every time the child awoke. I also used the chloroform, which the child resisted as at first, but sleep was easily produced, and with the same relief from suffering when she awoke, the chloroform calming all the symptoms after the stupor had gone off.

29th.—The girl passed a good night, having had but three or four slight attacks; I found her on her hands and knees, busily eating bread boiled in milk. The wound was healthy, and gave her no pain; the skin cool; the pulse 84. She said she was much better, but expressed great fear of the chloroform, which I promised not to use until evening. She had, during the morning, two loose motions, for which I ordered an opium pill, and, if necessary, directed one to be repeated every four hours. During the day she was visited by a young friend, who reported to me that she had been three or four times purged, and that the motions were sometimes bloody; also, that there were frequent spasms, and that her tongue was severely bitten. He kindly returned to her, and had the liniment applied to her back and abdomen, and, at the same time, gave her an opium pill. In the evening I exhibited the twenty drops of chloroform with the usual benefit, and ordered her to have two glasses of wine, and beef-tea with bread, which she took freely.

30th.—She passed a good night, having slept well; only two slight fits of spasm occurring during the night; but through the day she bit her tongue severely in one of the attacks. She was frequently rubbed with the liniment, and sat up for a short time to have her bed made. The liniment and opium were continued.

31st.—She still improved; my young friend visited her regularly three or four times a-day, as I was unable to attend from ill health. He had the liniment employed; gave her opium when required, and supplied her with wine, beef-tea, and some strawberries and milk daily, until July 8th, when I again visited her, and found her cheerful and happy, and able to take food without pain or uneasiness. The wound on the heel was nearly closed, and the cramps almost completely gone, except occasionally in the legs.

July 11th.—She is in perfect health.

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## EXTRACTS FROM FOREIGN JOURNALS.

### *Of the principal Tænifuge Medicines actually in Use, and of the New Drugs of this Nature lately introduced from Abyssinia, viz., Saoria and Tatzé.*

By M. STROHL, Strasbourg.

[Extract from a Memoir, read to the Society of Medicine, April, 1854.]

(*Continued from preceding Number.*)

The fruits called *tatzé and zareh* are the produce of a shrub of the family of the myrsinaceæ, the "*myrsina Africana.*"

This plant is found in Abyssinia, in moist rocky places at the Cape of Good Hope, in the Azores, in Algeria, and other parts of Africa. According to M. Schimper, it is met with in Abyssinia at an elevation of 9,000 feet in dry, shady places.

Stems slightly pubescent, rounded; leaves alternate, dentate, glabrous, coriaceous, elliptical; inflorescence in cymes; flowers polygamous, diœcious, axillary, sessile, united in threes. The lobes of the corolla and of the calyx are oval, acute, speckled, one half shorter than the stamens, which are inserted into the base of the corolla. Anthers bilocular, dehiscent from the base to the summit; pollen spherical; ovary round; style cylindrical, caducous, very short, rounded at the summit. Fruit about the size of a juniper berry, glabrous, shining, of a reddish brown colour. The taste is not at first so aromatic and oily as that of saoria, and is less astringent, but soon developes in the pharynx an acrid sensation, attended with a feeling as if the throat were scratched, and heat much greater than is produced by saoria. According to Dr. Petit the inhabitants mix *tatzé* with barley as food for their asses and mules. M. Schimper states that the fruit, either fresh or dried, is a powerful tænifuge: the ordinary dose of the dried fruit is about half an ounce, reduced to powder, and blended with water. This plant grows as extensively as the preceding, can be had in quantity at any season, and could, in all probability, be acclimatised in Europe.

The author here details six cases in which this drug has been used:—

Case.—Professor Tourdes.—H., a boot-maker, of lymphatic temperament, delicate constitution, came to Strasbourg in 1842. At times he suffered from general indisposition, want of appetite, and indigestion; but never suspected that he was the subject of tape worm until August, 1853, when he first discovered some large fragments in the stools. Frightened at this discovery, he went to consult M. Tourdes the same day, and as there existed no contra-indication he was ordered a dose of tatzé the following day in soup of lentils. The patient did not take it without great repugnance. No colic nor motion followed for three hours; a dose of castor oil was then administered, and an hour after there followed a very abundant evacuation, along with which was expelled a bothryocephalus, measuring eight or ten yards. The tænia was divided into two fragments, one of which terminated in very fine, almost filiform joints; some joints of small size were disseminated through the fæcal matter, but the head was not discovered—very accurate search was not made for it. For some time after the patient's health was much ameliorated: the moral impression had a salutary effect; but now, his fears returning, he affirmed that he could not take *tatzé*. So invincible a repugnance does he bear against this remedy that, although aware of its efficacy, he cannot bear the idea of taking it.

From these cases it would appear that tatzé is taken with much greater repugnance than saoria, and that the taste of it is more acrid and persistent. In three, vomiting followed soon after the administration of the drug, nevertheless the portion which remained was sufficient to cause the expulsion of the tape-worm. Thence, we may infer that the dose was, possibly, unnecessarily large, and that a smaller quantity would be more easily swallowed, and cause less disagreeable symptoms, yet be equally efficacious. The patient never complained in the least of colic. The purgative effect was not constant, perhaps on account of the quantity of tannin which tatzé contains. One of the patients only suffered from general indisposition and headach, not, however, of much moment. Tatzé seems to be tænicide.

As to the urine; where this was watched, it was found to be of an inky colour, probably analogous to the coloration that has been already noticed after the use of saoria.

Tatzé is a powerful tænifuge, which has succeeded in all the six cases in which it was administered. This number is too small to draw any conclusion as regards the constancy of its action, but it is quite sufficient to assure us that it at least deserves to be placed among the resources of materia medica. Tatzé is less gentle in its action than saoria; yet it would be worth trying whether by a diminution of the dose or the combination with it of some other pharmaceutic preparation, as opium, for example, it would not be possible to diminish the troublesome symptoms attending its use. As to its mode of administration, it should be given in doses of about half an ounce, reduced to powder, and blended in a tisane or aromatic infusion; if after three hours it has not caused a motion from the bowels, or if in the stools which have followed no traces of the worm are to be discovered, a dose of castor oil should be administered.

In conclusion, from these trials, insufficient it is true, it results that saoria and tatzé deserve our attention, and it is probable that saoria will hold the first place among our tænifuge remedies. Mayor, who has divided the bothryocephalus into two kinds, according to its joints, says the etherial extract of male fern expels that with the long joints, whilst that with the short joints requires the powder of the fern or bark of the pomegranate root.—*Gazette Medicale.*

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## SUMMARY.

*Pathology and Treatment of Hooping Cough.*—Dr. Gibb has published a treatise on Hooping Cough, in which he strongly advocates the free internal exhibition of dilute nitric acid, a remedy first suggested to him by Dr. Arnoldi of Montreal, and he asserts "That it not only arrests the paroxysms and removes the hoop, but that it shortens the disease almost as effectually as quinine does intermittent fever; curing the disease at the end (on an average) of five or six days, others in the course of two or three days. Dr. Gibbs gives the following theoretic explanation of its effects:—"It not only produces a powerful antispasmodic effect, but an equally tonic influence, and supplies to the blood an element—nitrogen—which removes or neutralizes the excess of fibrin existing in that fluid,—one of the dangerous elements of the disease,—and so destroys the poisonous principle combined with it, which is the primary cause of the affection."

The method of exhibiting nitric acid for hooping cough, as adopted by Dr. Arnoldi, and followed by Dr. Gibb, is the following:—"To a tumbler-ful of very sweet water (almost syrup), add as much acid as will bring the water to the strength of pure lemon juice, when it is ready for use. An adult may consume this quantity in three or four hours; a child one year old may take a dessert-spoonful every hour; for younger infants, the dose may not exceed a tea-spoon full every two hours. To prevent injury to the teeth, a gargle composed of two drachms of the carbonate of soda to eight ounces of water, may be used *immediately* after taking the acid mixture." "It must be remembered that the more frequent administration of the medicine produces a more rapid effect in cutting short the disease; and I have very seldom found it necessary to diminish the doses given, or even to caution the parents against its use. Nor have I seen any bad effects whatever from persevering employment of it in curing this disease; and its use has not been confined only to my friend Dr. Arnoldi and myself, but many others employ it with equally beneficial results, in a climate, too, (Canada), which severely aggravates the malady, necessarily, from the lowness of the temperature in the winter season, and the variable alternations in the spring and fall of the year."

In addition to the treatment with nitric acid, Dr. Gibb recommends the use of chloroform, as suggested by Dr. Churchill, and Dr. Todd. "For young children, small doses of ten or fifteen minims, dropped upon a linen handkerchief, and held a short distance from the child's mouth, so that the air may be admitted along with the vapour of the chloroform, will prove the most convenient plan of administering it. This may be repeated at intervals, according to the severity of the paroxysms, and as no warning can be given of their approach, it will be advisable not to wait for their invasion, as the chloroform will, I feel satisfied, ward them off as effectually as if used during their presence." We subjoin Dr. Gibb's views of the nature and pathology of the disease.

1. Toxication of the blood, producd by some unknown specific influence, peculiar in its nature, not unlike that of measles and scarlet fever, in the circumstance of its affecting persons once during their lives, generally persons under five years of age.

2. Irritation of the terminal loops of the nerves, supplying the mucous membrane of the bronchial tubes, producing vascularity and consequent secretion of a greater or less quantity of mucus.

3. Reflex action of the pneumogastric and respiratory nerves, followed by congestion of the vessels of the medulla oblongata and pia mater surrounding it, and also at the origins of its nerves.

4. Spasmodic contraction of the circular and longitudinal muscular fibres of the bronchi, consequent upon the foregoing, manifesting itself in the series of sudden expiratory efforts, and the well known sonorous bark, draught, or hoop.

5. The immediate result of which is frequent and rapid respiration to compensate for its temporary absence, producing a highly oxygenated or super-oxidised state of the blood, with a tendency to the formation of fibrous concretions in the heart during the spasms.

6. As a secondary result of the spasmodic muscular contraction of the bronchi, we have a temporary hypertrophy of the muscular fibres thus acted upon, which disappears again after the cure is established.

7. The disease is at first irritative and catarrhal, and afterwards nervous and spasmodic, both due

to the unknown peculiar exciting cause present in the blood.

8. It manifests the peculiarity of running a special course through its different stages, three in number, but which may be cut short or greatly modified by treatment.

*On the Treatment of Gout.*—In a work recently published by T. Spencer Wells, F. R. C. S., on Gout and its Complications, the following remarks on the treatment of this affection occur:—"*Chemical solvents* are also very important remedies in gout. The solvents of lithic acid, or those which render it solvent, by converting it into the lithates of potash or soda, may be occasionally required and used as palliatives, while we are endeavouring to remove the state of system on which the formation depends. The Vichy water, or the artificial substitute made by Dr. Struve, is the best form of administering them; half a pint being taken early in the morning, and again, an hour or two before dinner. The liquor potassæ is less useful than the carbonates of potass or soda. Dr. Golding Bird recommends half a drachm of bicarbonate of potass three times a day, with five grains of citric acid, which is just enough to render the solution sparkling. The patient should use diluents freely at the same time, to assist in the solution of the lithic acid.

"No means of rendering the urine alkaline, however, can be persevered in without injuring the general health, leading to muscular debility, or to a tendency to the formation of other urinary deposits. The borate of potass is strongly recommended by M. Bouchardat, as a solvent of lithic acid. He gives fifteen grains in a tumbler of water several times daily. It is said to be less injurious than the alkaline salts just recommended, but I have no experience of the results of its use. The phosphate of soda is another powerful solvent of lithic acid; it may be given in doses of a scruple or half a drachm, freely diluted. It even lessens the pain, and allays the feeling of general irritation during an acute attack, and after the attack has gone off, promotes convalescence. The phosphate of ammonia, recommended by Dr. Buckler of Baltimore, in doses of ten grains, three times a day, has been tried by Dr. Golding Bird; he says:—'It has always succeeded in keeping uric acid in solution in the urine, and in this respect it has appeared to be at least equal, if not superior, to borax and phosphate of soda; but I certainly have never seen it diminish the tophaceous deposits of chronic gout. In more recent effusions in the joints, in the sub-acute forms of rheumatic gout, it has certainly been of service.' I have, however, heard of very unpleasant symptoms following its use. Benzoic acid and benzoate of ammonia have been used with advantage, but Mr. Ure has not established his proposition that the benzoates are useful by converting insoluble lithic into soluble hippuric acid. The benzoate of ammonia is the most useful, as it has a decided tendency to promote perspiration; it is easily given by prescribing five grains of benzoic acid, with an equal quantity of sesquicarbonate of ammonia, to be dissolved in two ounces of boiling water, and taken three times a day with a little syrup. But of all chemical solvents, I am disposed to regard the iodide of potassium as the most useful, as it has so great a solvent power on the lithate of soda, which is the most common impurity in the blood of gouty patients. A concentrated solution of the iodide dissolves the lithate of soda very readily out of the body, and to a much greater extent when the lithate is recently prepared and the solution is warm; but it has very little power of dissolving pure lithic acid. I have given it very extensively for the last thirteen years, in almost all forms of gout, except during the acute attack, and in almost every case with the most encouraging results. I have tried it in doses from eight grains three times a day, to one grain daily in divided doses. I have had patients who have continued the latter small dose for several months, and after carefully watching the effects of discontinuing its use, and returning to it, I have been convinced that the improvement in health, which accompanied and followed its use, was really connected with, and dependent on, the use of even so small a quantity. It clearly affects the blood, for it may be detected in the urine; and I can only suppose that it must tend to keep small quantities of lithate of soda formed in the blood in a state of solution, although it is, I confess, difficult to see how so very small a quantity could act upon a sufficient quantity of lithate of soda, to make any appreciable alteration in the condition of the blood. However this may be, the good effects are too uniform to leave any doubt as to the value of the remedy." Respecting the use of colchicum, Mr. Wells considers the tincture of the flowers to be the best and most uniform preparation, and that the ill effects of this drug are attributable to the unnecessarily large doses in which it is given. He exhibits as small doses as one drop of the tincture three times a day, but continues it for many weeks; believing that "in gout, although colchicum diminishes the quantity of lithic acid, and the lithates in the urine, yet that it leads to a greatly increased discharge of urea, and that its beneficial action depends upon a power it possesses of so modifying the chemical changes which go on during the assimilation of nutriment, and the metamorphosis of tissue, that any excess of nitrogen present is thrown off as soluble urea, instead of as insoluble lithic acid, or as lithate of soda."

*On the Use of Subnitrate of Bismuth in Lavements.* By M. Trousseau.—There has been remarked of late, in France, a great amount of "diarrhœic flux," *i. e.*, of intestinal catarrh, with the production of glairy and bloody evacuations. Two infants, in La Salle St. Bernard, were cured in a very simple way:—They were still at the breast; one had had cholera, marked by vomiting, diarrhœa, coldness, and well marked emaciation. Opium, nitrate of silver, and other remedies were given, by which the sickness was arrested, but the diarrhœa continued. The other child had not had vomiting, but there was a glairy diarrhœa, showing that the disease was limited to the large intestine. M. Trousseau prescribed a lavement according to the following formula:—Subnitrate of bismuth, two scruples; thick linseed-tea sufficient; the mixture to have the consistence of soup. The diarrhœa ceased immediately upon the administration of the lavement. It is known that M. Monneret gives, in similar cases, to infants as much as two or three ounces (?) of the subnitrate of bismuth daily. M. Trousseau rarely goes beyond four scruples,—very often he is content with half that quantity administered in water, or in the form of pastilles. Dr. Lassegue, chief of the clinique of the Hotel-Dieu, first entertained the idea of employing it as a lavement in cases of inflammation of the colon, from having witnessed its beneficial effects in certain diseases of the skin, in which some of the subnitrate, mixed with albumen or thick linseed-tea, spread upon a poultice, and rendered humid by the application of glycerine, was brought into contact with the affected parts. M. Lassegue was thus led to its employment in affections of the large intestine, and obtained results which deserve to be recorded, the more so, as the remedy being harmless, may be applied without fear in all similar cases.—*Journ. de Med. et Chir. Prat.*

*Syrup of the Carbonate of Iron.*—This new preparation is described by Dr. Richardson in the *Association Journal* of July 28. He finds that it preserves the iron in the state of carbonate for an indefinite period, and as a medicine is agreeable in taste and convenient for dispensing. It may be prepared according to the following formula:—Take of carbonate of potash half an ounce, sulphate of iron three drachms and one scruple, simple syrup eighteen ounces, water ten ounces,—dissolve the sulphate of iron and carbonate of potash each in five ounces of the water,—mix the solutions. The precipitate is to be collected on a cloth filter, and after being washed with distilled water, is squeezed into a pulp as dry as it is possible,—this pulp is then rubbed up quickly with the syrup. The dose of the syrup thus formed is from two drachms to half an ounce.

*On Water Strapping as a Surgical Appliance, and a proposed Substitute for the Ordinary Sticking Plaster.* By C. Holthouse, Esq., Assistant Surgeon to the Westminster Hospital, &c. &c.—The object of the author of this paper was to direct the attention of the profession to the superiority of wet-strapping over ordinary diachylon plaster, in the treatment of ulcers and certain cutaneous affections of the extremities, as advocated by Mr. Chapman, and to recommend its adoption in injuries and diseases of the joints, and in dressing stumps after amputation. The advantages of this application over plaster are:—

1st.—Its innocuousness, being entirely free from the irritating effects of the latter, and never producing inflammation of the skin, or the eruption of pustules, or vesicles.

2ndly.—The comfort the patient experiences from its application.

3rdly.—Its cleanliness.

4thly.—The ease and quickness with which it is removed, from its not adhering to the hairs of the part.

5thly.—Its cheapness.

6thly.—It may be made the vehicle for the application of remedies.

The material made use of may consist of linen or calico, bleached or unbleached; and the older it is, provided it be not rotten, the better it answers the purpose. It must be cut, or torn into strips of varying length and breadth, according to the part to which it has to be applied; the strips must then be immersed in water till thoroughly saturated, when they are fit for use. If the disease to be treated be an ulcer of the leg, the strips should be about two inches in breadth, and of a length exceeding somewhat the circumference of the limb; they should then be applied exactly in the same manner as plaster, each piece overlapping a portion of the one immediately below it; in fact, the directions given by Mr. Baynton for strapping the limb, may be strictly followed in the application of the water-strapping, save and except that his directions to remove the hair from the part may be dispensed with; a roller must afterwards be applied in the ordinary manner.

Four cases, in illustration of this method of treatment, and of its beneficial results, were then given; one being an ulcer of the leg of fourteen years' standing, that had resisted repeated attempts to heal at other hospitals; another, a case of eczema impetiginodes, affecting both lower extremities, and of three years and a half duration; a third was a case of a crushed thumb, followed by gangrene and subsequent amputation; and the fourth was an amputation of the thigh, for extensive disease of the knee-joint and upper third of the leg.—*Royal Med. and Chir. Soc., June 27.*—*Lancet.*

*Extract of Bullock's Blood.*—Professor Maunther, of Vienna, recommends the extract of bullock's blood as one of the most efficacious of all the analeptic tonics with which he is acquainted. It is most easy of digestion, and, to all appearance, its action upon the human economy is analogous to that of cod liver oil; at the same time, in its administration, it has none of the inconveniences that, in a greater or less degree, will always belong to the latter medicine. It must be very carefully prepared, so that the drying of it be not carried on too rapidly, lest during its preparation it should be at all carbonized, and, moreover, it should be prepared tolerably fresh for use. In Germany it has been somewhat extensively used in conjunction with other ferruginous tonic medicines, in cases where chalybeates are clearly indicated. The following is the mode in which it is directed to be prepared by Professor Maunther:—Take a given quantity of bullock's blood, which is to be filtered or strained, and then evaporated to complete dryness, or to the ordinary consistence of extracts in common use. By this evaporation, the blood is deprived of no other of its constituents than the water which it contained. It may then be administered, mixed with a little milk, or in any other suitable medium, and in doses according to the ages of the patients for whom it is prescribed. It may be given to the extent of twenty or thirty grammes, or even more, to adults; in less proportion, of course, to younger patients.—*Annals of Pharmacy.*

*Calcareous Sulphate of Quinine.*—MM. Delondre and Henry recommend the calcareous sulphate of quinine to be prepared in the following manner:—A solution of sulphate of quinine, in boiling water, is to be precipitated by adding to it, in excess, milk of lime, or lime suspended in water, as in the preparation of c mmon lime water; the precipitate is then to be washed and dried at a moderate temperature. The object sought to be gained by this preparation is, to render the quinine additionally alkaline, so as the more effectually to neutralize such acids as may be in the stomach in certain states of disease, and which by their presence tend to convert the fecula of the aliment into glucose.—*Annals of Pharmacy.*

*The Behaviour of Fermentation and Putrefaction in Filtered Air.* By SCHRODER and DUSCH.—According to the researches of Schwann, which have excited great attention, the microscopic germs of fermentation, fungi and infusoria, are the agents which develope fermentation and putrefaction; and, consequently, if the air is heated to redness, which conveys these germs, the above phenomena cannot take place. The authors have filtered air through cotton wool, which air they have tested by allowing it to pass over substances which readily ferment or putrefy, and have arrived at the following conclusions:—1. That the filtered air will not putrefy flesh recently boiled with water. 2. That broth will remain many weeks unchanged in this air. 3. That the sweet wort from malt will remain unaltered for a week, and not undergo fermentation. On the contrary, the coagulation of milk goes on as rapidly in filtered air as in that which is not filtered. Flesh, which probably was not sufficiently heated before the experiment, putrefied in filtered air. The authors would draw also from their experiments the conclusions that there is a spontaneous decomposition, for which oxygen only is necessary, and which causes the putrefaction of flesh without water, and that of the caseine of milk, which converts the sugar of milk into lactic acid, but that the fermentation of malt wort, &c., does not belong to this category, as to effect this result some organic admixture of the air is necessary, which can be removed by filtration or a red heat.—*Annals of Pharmacy.*

*Prurigo formicans of the Vulva and the Anus.*—We find the following "specific solution" recommended by M. RICHARD, of Soissons, in the *Revue de Thérapeutique Médico-Chirurgicale*:—Take of sulphate of zinc and alum equal parts; reduce these salts to a coarse powder, and put them upon an earthen dish coated with oxide of lead; place the dish on a gentle fire, and leave it until the mixture no longer emits air-bubbles and is turned into a stony consistence. Take the dish from the fire, pound the petrous substance into a fine powder, and throw about half an ounce of it, in divided parts, at about a minute's interval (to avoid too powerful an effervescence), into a quart of boiling water; then filter through paper, and keep the lotion for use. Every morning apply some of this solution with a fine sponge on the affected part; then, if it be the anal orifice which is suffering from prurigo, soak a piece of linen folded square (a little better than an inch to each side), and introduce one of the angles into the orifice. The mode of dressing is the same for the vulva. This lotion is also extremely useful for various kinds of eruption, but in the latter cases internal medicines should also be taken; these should principally consist of alkalies, bitters, and purgatives.—*Lancet.*

*Cure of an Aneurism by injecting into the Sac theAcetate of the Peroxyde of Iron.*—Dr. PAVESI, of Bergamo, has lately injected a strong solution of the above-named salt into an aneurism of the temporal artery affecting a young man. The sac was about one inch from above downwards, eight lines transversely, and might contain a drachm of fluid. A puncture was made into the tumour, and bright arterial blood escaped; the glass-pipe of one of Charrière's syringes was then introduced, and about sixteen drops of the solution thrown in. The tumour was ten minutes afterwards quite solid, and in one month no trace of the aneurismal tumour was left.—*Lancet.*

*Poisoning by Muriate of Antimony.*—By E. WELLS, M.D. A farmer took an ounce of muriate of antimony, combined with an ounce of Friar's balsam, by mistake for a black draught, at half-past 5 A.M. On discovering his mistake, he took immediately a large quantity of salt and water, which made him vomit freely. At half-past 7 A.M. his medical attendant gave him a decoction of yellow bark. When Dr. Wells saw him at half-past 1 P.M., he was recovering from the collapse. Small doses of laudanum in almond emulsion, with ice and beef-tea injections, were ordered. The throat and tonsils were inflamed. He gradually recovered after partial sloughing of the tonsils, on which the violence of the poison had expended itself. *Remarks by the Reporter.*—Cases of poisoning by chloride of antimony are extremely rare. Orfila only mentions one case, which occurred about two hundred years ago. Dr. Taylor records four cases. The poison appears to affect the throat principally, as in Dr. Wells' case, and his patient took the largest quantity from which recovery has yet taken place.—*Assoc. Med. Journal.*

*The Evaporation of Liquids.*—From some investigations conducted by Marcet, the following facts may be deduced:—

1. A liquid, as water or alcohol, exposed to the air in an open vessel, is always colder than the surrounding atmosphere, and the difference is greater the higher the temperature of the surrounding atmosphere is. The difference amounts to some tenths of a degree between 0o and $5_0$ C, to 1½ degree between 20° and 25°, and from five to six degrees between 45° and 50o.

2. According to the nature of the vessel, the evaporation of a liquid is more or less rapid. Thus, for example, water and alcohol evaporate when contained in vessels of glazed porcelain, more rapidly than in exactly similar vessels of glass or metal, without one being able to ascribe the difference to the influence of radiation or capacity for conduction.

3. The temperature alters according to the nature of the vessel which contains it, although the vessel be of the same shape and size. Thus, water between 15° and 18° is three-tenths of a degree warmer in a metallic vessel than in a glass one, and the difference always increases with the elevation of temperature. The third fact is the necessary consequence of the second, that vessels of different materials more or less increase or retard the evaporation of liquids.

4. When all other things remain equal, the nature and size of the surface of the vessel, as well as the quantity or depth of the liquid, in certain limits appears to accelerate the evaporation.

5. Water which contains as much salt as sea water, evaporates less rapidly, and, consequently, generates less cold, than pure water under the same conditions.

6. Water on quartz sand evaporates more quickly, according to the nature of the vessel, than a similar surface of water without sand.

7. As a consequence of the foregoing, the temperature of the liquid, mixed with sand, is always some tenths of a degree less than that of water free from sand.—*Dingl. Polyt. Journal, and Annals of Pharmacy.*

*Distinctive Marks of Ruptured and Perforated Intestine.*—With regard to cases of ruptured intestine, a question might be raised of some importance, but which has hitherto not received a very satisfactory answer in any of our manuals of medical jurisprudence, viz., Is it possible to distinguish the rent in an intestine alleged to have been ruptured by violence from the perforation made by an ulcer of the intestine, whether tuberculous or otherwise? In both instances the openings are usually circular, and on a cursory examination might be pronounced to be very much alike. The true distinction, however, and one which we think will be found to hold true in every case, we find stated by Dr. T. Gairdner, in one of the late meetings of the Edinburgh Medico-Chirurgical Society. Through the kindness of that gentleman we reproduce what was then stated in an amended form:—"In ulceration of the intestine leading to perforation, the mucous membrane is commonly destroyed over a much larger space than the peritoneal coat; the opening in the latter is small, rounded or oval, and with thin, almost transparent edges, owing to the great thinning of the tissues which takes place previous to perforation. In rupture of the intestine from external injury, the opposite of all these conditions exists. The opening of the peritoneal is larger, or at least appears larger, than that of the mucous coat; and the exuberant edges of the latter, especially when the rupture is in the duodenum or jejunum, are found protruded and everted through the peritoneal opening. The form of the rupture is not constant; more or less of a lacerated appearance may or may not be present; the peritoneal rent is such as frequently to leave a portion of the fibrous or muscular coat visible below; and this latter is of its natural thickness and consistence. One morbid condition simulates rather closely rupture by violence, viz., perforation by disease beginning in the peritoneal coat. But this is very rare, and the traces of chronic disease are evident in the examination of the body." In the case of peritoneal ulcer quoted, however, the process was much more rapid, as gangrene evidently preceded it; and in such circumstances traces of chronic disease are not to be expected.

*New Variety of Balsam of Copaiba.* By Mr. Charles Lowe, Assistant in the Royal Institution Laboratory, Manchester.—An organic fluid was lately placed in my hands, by Mr. Crace Calvert, for examination, which he had received from an oil merchant of this city, who stated that all he knew of the substance was, that it was obtained by the incision of a certain tree growing on the coast of *India*. From the characters it presents I have ascertained it to be a balsam of copaiba, but as it differs in some of its properties from other balsams that I have examined, I forward you the following notice, in hopes that it may prove interesting to some of your numerous readers.

In appearance this balsam of copaiba is dark-coloured and turbid. Its turbidity is due to a greenish resinous matter, held in suspension, which is, however, easily separable, either by filtration or deposition, leaving a brown transparent liquid of sp. gr. 0.970. When the latter fluid is submitted to a careful distillation it yields:—

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| Essential oil, . . | 65 per cent. |
| Resin, . . . | 34 ,, |
| Acetic acid and water, . | 1 ,, |
| | 100 |

I find that the essential oil in its various reactions with potassium, iodine, nitric acid, &c., and moreover in taste, exactly corresponds with those presented by pure essence of copaiba. The resin left by distillation of the balsam, either with or without water, is, if deprived of the whole of the essential oil, extremely hard. Its entire solubility in coal naptha proves the absence of any of the soft resin which exists in most of the copaiba of commerce. This hard resin (copaivic acid), being most probably the active principle of balsam of copaiba, I am induced to think its quantity and purity in the one I have examined is indicative of its superior value as a medicament. The dark colour of the balsam may, perhaps, limit its employment, but the large quantity of copaivic acid it contains renders it valuable, as the latter may be made available by heating the filtered balsam to the boiling point with a small quantity of caustic potash or soda lye, of sp. gr. 1.34, and separating the resinate of potash or soda from the essential oil. The alkaline resinate may then be dissolved in water, giving a colourless solution (similar to Frank's specific), or the balsam may be treated with magnesia to form the ordinary copaiba pill.

I have in conclusion remarked:—

1st. That the essential oil obtained by the distillation of balsam of copaiba has, like several other hydrocarbons, the property of dissolving indigo.

2ndly. The new variety of balsam above described presents the peculiar property of becoming gelatinous (so much so, that the tube may safely be inverted), if heated to 230° Fah., even if a *sealed* tube be employed. This character being dissimilar to the one given in the same circumstances with such other balsams as I had at my disposal, I am induced to attribute it to the large amount of "*hard* resin" it contains.

3rdly. Balsams of copaiba in general give, on distillation with two per cent. sulphuric acid, a beautiful blue volatile oil. Chlorine, hyperchlorite of lime, and bichromate of potash, give a similar character with the balsam, which appears to me to be due to the oxidation of the hard resin, as I have been unable to obtain but a small proportion of the blue-coloured oil when I employed a balsam containing "*soft* resin," comparatively to when I made use of the one above described, which, as I have already remarked, contains only "hard resin." A further support of this view is, that pure essence of copaiba assumes no blue coloration when distilled as above.

4thly. That cold sulphuric acid produces a purple coloration with balsam of copaiba, similar to that obtained by its action on cod-liver oil. Such being the case, it is probable that a small quantity of it, mixed with olive or some other oil, may be sold by unprincipled persons as genuine cod-liver oil.—*Pharmaceutical Journal.*

*Starch Bandages in Fractures.*—Mr. Stanley has had opportunities lately of verifying some old, but rather uncertain opinions as to the treatment of sundry varieties of fracture, more especially his own views as to fractures in children, which appear to us of a very practical nature. He has also had his attention called, as we mentioned before, to the advantages of starch bandages, or what is called the "*immoveable apparatus.*" In Belgium and in some parts of France, it appears that the latter is put on at once as the rule in fractures, rendering the limb more manageable, it is said, if not placing it under more favourable circumstances for union to take place, than the more cumbrous appliances of wooden splints. Mr. Stanley is of opinion, on the contrary, that starch or gummed bandages should never be applied while there is a chance of swelling of the limb, and as a general rule only towards the end of the cure, to economise time, and save the patient's health. Mr. Stanley's large experience has given him opportunities of seeing some things as to cases of fracture in his own practice, as well as in that of Mr. Abernethy and Mr. Lawrence, which are very worthy of being noted; in addition to direct "*force,*" exerted against a bone, the first or chief cause of fractures, he has had opportunities of knowing several curious but instructive cases, due also to mere "*spasm*" of muscles. Fracture has thus occurred in the violent paroxysmal struggles of epilepsy; even in the spasms of cholera, fracture has been known to occur; a boy simply throwing a cricket-ball was found to have sustained fracture of the humerus; a coachman stepping from his box has been known to break his leg from this simple effort! Either direct mechanical force or spasm of muscles will be found in most cases the cause of fracture; but a third mode, not suspected often, will be discovered, namely, the "*shock*" conveyed to a distant bone, weaker, perhaps, than the bone primarily injured. The boxing-master in Molière says, there is no fear while you give every kind of hard kick and thump, but *take* none; he was not aware that one less accustomed to the art, and with weaker limbs, might break some of the latter. Mr. Stanley mentions a boxer thus kicking at his adversary, who from the "shock" conveyed from the toe, sustained a fracture of his leg in two places! The most remarkable case of this kind we now remember is the following—the preparation of the tendon is in the museum at Bartholomew's:—A young man at work one day book-binding in a workshop, where there happened to be a steam-engine and fly-wheel, heedlessly tied a piece of whip-cord round his thumb to put him in recollection of something; one end of the string gets into the machine accidentally, he suddenly is frightened—he drags—his thumb is gone—and his arm is broken by the spasm in two places! When brought to hospital it was found the *flexor pollicis longus* was drawn out, the humerus broke at the deltoid insertion, and radius and ulna both bent!

In cases of children you may be called in, but not able to make out fracture. The cause of this is found in the fact, that the periosteum covering the bones of children, more especially the long bones, is more thick and dense than that investing the similar bones of adults. A museum preparation at King's College, indeed, shows the bone of a child completely broken across, but the periosteum whole and uninjured: as a rule familiar, of course, to the practising surgeon, the bones, when broken in children, give little or no *crepitus*—are very little displaced on account of this thick ligamentous character of the periosteum; the soft animal matter also, we need hardly say, predominates; hence, in case of snapping like glass, as in old people and cancerous diseases, it is said the bones of children bend like tin. In cases of fracture in children, the difficulty is to find the fractures out: they almost cure themselves, while in older patients, they, on the contrary, hear the cracking themselves, but the cure is not so easy. We are aware these observations are familiar to practitioners; but it is useful in every-day practice, even for those who read, to renew their recollections of matters thus common.

One exception to the rule as to fractures in adults, Mr. Stanley thinks, is not mentioned in books. A case, now in the front ward of Kenton, with fracture of the carpal end of the radius, and a case last September, under Mr. Paget, illustrate the point; another case, something like the following, may even involve a practitioner in a lawsuit:—A gentleman falls into a gravel-pit—walking, we will say, across Blackheath; he is taken home with broken leg, it is said, swelling, ecchymosis, pain—in a word, all the usual signs of fracture, but no *crepitus* can be detected; there is immense effusion, and the calf of the leg perhaps twice its natural size: in consultation it is thought the popliteal vessels have given way, perhaps, but there is no displacement, no crepitus; four or five weeks *after* a fracture is discovered. One can fancy how awkward this is: the effect is due, according to Mr. Stanley, to the bleeding of the bone itself, and the soft and highly-vascular nature of the cancellous structure; you will not expect to find it in the sharp edge of the tibia or ulna, but about the heads of those bones. In the treatment of fractures, Mr. Stanley does not know much that is new; but being asked by the young King of Portugal lately what he thought of the "immoveable starch apparatus," he stated that it simply economises time, but otherwise does not seem to possess any superiority over the apparatus ordinarily used. Cheselden, it seems, first used it in the shape of white of eggs and flour. "Once on a journey I thus set the cubital bones," says Cheselden: the plan at St. Bartholomew's consists of layers of lint first round the broken parts, then pieces of roller, well steeped in gum and chalk; if patients begin to ail with fractures, or the appetite fails, or bed sores threaten, then, but not till then, he thinks it advisable to put on the gum and chalk, and send them out under the air.—*Medical Circular.*

*Disclosures respecting Spirit-rapping.*—At the meeting of the Academy of Sciences at Paris, on the 12th of June last, M. Rayer called the attention of the members to some experiments of Dr. Schiff, of Frankfort, touching spirit-rapping. This physician had under his observations a young girl, with whom certain noises took place, attributed to the rapping of spirits. Dr. Schiff, by paying much attention to the case, found out that the sound issued from the girl herself, and not from any other source. The noise is, in fact, produced by the repeated slipping of the tendon of the peronæus longus from the sheath in which it glides in passing behind the outer ankle. Dr. Schiff succeeded in repeating upon himself the same phenomenon presented by the girl, which was supposed to depend upon a rapping spirit. When the sheath of the tendon is weak and lax the noise is very easily made, and may be produced without moving the foot in the least; but when the finger is placed behind the outer ankle just when the sound is being made, the alternate and repeated displacement is felt without difficulty, the action being accompanied by a rapid up-and-down movement of the same tendon.

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# THE
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## STEEVENS' HOSPITAL.

### *Case of Circumscribed Traumatic Aneurism of the Ulnar Artery from punctured Wound; Treatment by Compression of the Brachial Artery; Cure.*

BY SAMUEL G. WILMOT,

SURGEON TO THE HOSPITAL.

S. Smyth, aged 24, a blacksmith, of very healthy appearance, was admitted into Steevens' Hospital on the 14th June, 1854.

He states that four weeks ago, while in the act of shoeing a horse, having driven the nail partly in, the animal made a sudden kick, and sent the nail into the forepart of his left arm, a little below the bend of the elbow. A sudden gush of arterial blood followed, which was finally arrested by a farrier (his employer) who was present. He states that five days afterwards he perceived a small pulsating tumour in the situation of the wound, which had healed, and that it gradually increased to its present size. During this period he was seen first by Dr. Mackesy, of Waterford, and subsequently by Dr. Darby and Dr. Whistler, of Bray, by the latter of whom he was sent to hospital for treatment.

On examination, a tumour about the size of a large walnut is observed on the front part of the left forearm, two inches below the bend of the elbow, and lying very slightly to the ulnar side of the mesial line; on its outer side is perceived the cicatrix of the wound where the nail had penetrated; a strong pulsation is perceptible when the fingers are laid upon it, and a harsh *bruit de soufflet* is audible in it by the stethoscope; pressure, however, upon any point of the brachial artery causes both these phenomena to disappear, and makes the tumour slightly collapse; it is well circumscribed by a thick fibrinous cup, still it is difficult to grasp it from its lying beneath the fascia, except in the centre, where the blood has made its way through the wound in that membrane. At this point the tumour is most prominent, the cyst being very thin and tense, and the skin over it being stretched and of a dusky reddish hue. The blood within is quite fluid, yielding distinct fluctuation, and when pressure is made on the tumour with the fingers, it gradually subsides, conveying the sensation as if its contents escaped beneath the muscles; on withdrawing the fingers, it quickly rises up. Measurement of the left forearm, over the tumour, is twelve inches and a half; that of the right, at the same place, is eleven and a quarter. The radial artery of the affected limb pulsates strongly at the wrist, but the ulnar artery cannot be felt. A difference of opinion seemed to exist amongst some of those who saw the case, as to which artery of the forearm had been wounded. The anatomical position of the radial artery, at the spot where the cicatrix was perceptible, was calculated to lead to the belief of its being that vessel which had been wounded; still, the circumstance of the radial pulse being strong at the wrist, and the absence of any pulse in the ulnar artery, seemed to establish the diagnosis, clearly fixing that it was the latter vessel which had suffered injury, and that, accordingly, the aneurismal sac had been formed in connexion with it.

The patient suffers neither pain nor inconvenience and can use the muscles of his forearm without any difficuly; pulse 80.

He was ordered to observe the strictest quietude in bed, to be placed on the *most sparing* diet, and to take the following medicine:—

℞ Inf. rosarum cathart., ℥viii.
Tinct. digitalis, ʒi.
M. St. coch. ii. amp. 4tis horis.

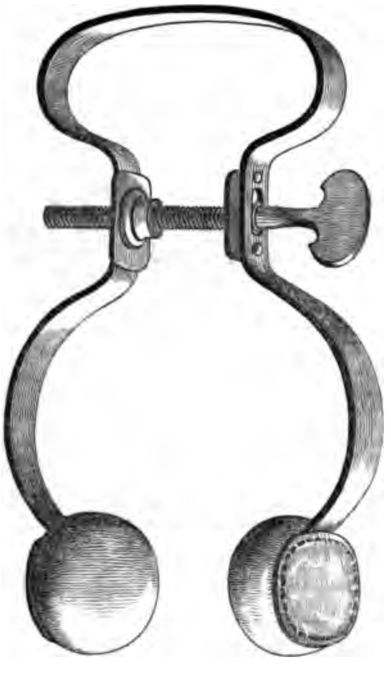
The left forearm was laid supinated on a cushion, and a cold evaporating lotion was applied to the tumour.

17th.—It was now determined to try compression of the brachial artery, to carry out which Dr. Bellingham kindly lent instruments, and afforded many valuable suggestions as to the mode of applying them. The mobility of the brachial artery and the laxity of the structures around it are great barriers to the maintenance of anything like steady compression of that vessel. At the spot where the artery can be most easily compressed, from its lying upon the bone, the nerve interferes. These difficulties were particularly experienced in the present case. The ordinary clamp and the circular tourniquet clamp were applied, but proved unsatisfactory from their liability to slip. It was found, however, that a very small amount of pressure with the fingers sufficed to command the artery; and it was further perceived, that by merely grasping the forepart of the arm with the fingers, a little above the elbow, in such a way as to press the vessel beneath or against the inner edge of the biceps muscle, was quite sufficient to arrest the circulation. Accordingly, it at once suggested itself to the mind, that the best and least painful instrument would be one so constructed as to make compression in the manner described. Until this instrument could be prepared, the clamps were left on, and the patient (who was very intelligent) was directed to command the artery with his fingers, for a short time, occasionally, so as to relieve the clamps.

The pulse is now 64, and the patient has been ordered to continue the same medicine. Ice to be applied to the tumour.

18th.—The clamp has remained on, but effectual pressure has been chiefly maintained by the fingers of the patient's right hand, and occasionally by another patient in the ward. The patient himself is able to keep up the pressure for fully half an hour at a time. The tumour has decidedly contracted. Pulse 64. Bowels have been briskly acted on by the medicine. He complains loudly of the rigorous system of diet which has been enforced. Ordered to omit the cathartic mixture, and to take the following:—

℞ Mist. camp. ℥viiss.
Tinct. digitalis, ʒiss.
Liq. opii (Batt.) ʒiss.
M. St. coch. ii. amp. ter. in die.



19th.—The instrument delineated in the woodcut having been made with a view of compressing the artery on the principle already mentioned, all the clamps were removed, and it was applied.

It is to be regretted that, owing to the haste in which this instrument was made, its construction is rather rude and clumsy, and, accordingly, it is less efficient than it otherwise might be. The patient, however, can wear it for several hours without interruption, and when it is fairly on the vessel it commands the circulation completely, but it is apt, on any movement of the arm, to slip away from the artery. Pulse 56. To continue the mixture.

25th.—Since last report, pressure has been steadily maintained, not, however, altogether by the instrument; the patient constantly resorted to the expedient of compressing the vessel with his fingers, so as to compensate for the inefficiency of the instrument, and occasionally for the purpose of changing the point of pressure. The tumour has become greatly reduced in size, and much firmer; the pulsation, too, when the pressure is removed for a moment, is found to be quite feeble; in the centre of the tumour, however, the blood is still quite fluid.* The ice has been kept to the part on and off. Pulse 52. Omit mixture.

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* The reduction in the size of the tumour is very obvious upon comparing it with a cast which was taken when the patient was first admitted; the measurement of the forearm is also much less.

The screw of the small compressor having got out of order, it became necessary to lay that instrument aside, and a circular tourniquet clamp, with the addition of Carte's elastic springs (which was made for the arm, and which Mr. Adams was kind enough to lend), was applied, and answered extremely well.

28th.—On taking off the clamp the pulsation has completely disappeared. The tumour is now very small, but still there is a point at which fluctuation is perceptible; along the inner border there runs a collateral vessel. The ulnar artery at the wrist, which before could not be felt, now pulsates distinctly. Pulse 53. The application of ice to be continued.

30th.—It was now considered advisable, with a view towards facilitating the absorption of the tumour, to make direct pressure upon it, which was done by means of a small pad of lint and a bandage rolled from the fingers to the elbow. The pulse having risen in strength and frequency, the patient was ordered eight drops of tincture of digitalis three times a day.

July 5th.—The pressure has been of great use; the tumour has become much smaller and harder, but there still remains a little fluid blood in the centre. The collateral artery before referred to has increased considerably. Pulse 50. Omit digitalis. The direct pressure to be continued.

15th.—The compress and bandage have remained on ever since, the latter having been tightened occasionally whenever it became loose. The tumour has been gradually and very slowly diminishing. A large pad was now laid over the tumour, and the bandage was rolled tightly over it.

20th.—Very little of the tumour now remains; but a good deal of hardness is still to be felt beneath the fascia, and in the centre is still a small fluctuating point. The bandage is to be left off, and he is to rub some camphorated mercurial ointment gently over the tumour.

August 1st.—To-day he requested to be allowed to return home to Bray, promising that he would attend to Dr. Darby until the tumour was completely absorbed.

14th.—He presented himself to-day for inspection. When the forearm is extended there is a projection where the aneurism existed, and a great deal of thickening, which appears to be in the fascia, there being in the centre still a very small point yielding fluctuation; but when the forearm is flexed hardly a trace of a tumour is to be felt.

The success of compression in a case such as the foregoing is calculated to exalt its merits not a little, and chiefly by showing that the sphere of its utility is not confined to pathological aneurism. Had compression failed in this case, its warmest advocates might have felt little surprise; and indeed it was undertaken rather as an experiment than with any certainty of its proving effectual. There were many obstacles to the perfect success of compression; still it was most important that it should succeed in this particular case. Independently of compression there were but three plans at our disposal:—first, direct pressure upon the tumour; second, ligature of the brachial artery at the bend of the elbow; third, laying open the sac, and tying the artery above and below the wound. With respect to direct pressure, this is a tedious and uncertain plan; and, in the case of Smyth, there was an additional objection to it from the extreme thinness of the cyst in the centre. Out of three cases of traumatic aneurism of the brachial artery at the bend of the elbow treated by direct pressure by Mr. Cusack, two were cured; but of these, one took twenty days before pulsation ceased in the aneurism—in the other this did not occur for upwards of thirty days.* In the third case the sac gave way, and the aneurism became diffused, leading to the necessity of tying the vessel.

The second plan mentioned, that of applying a ligature at the bend of the elbow, though a very simple proceeding, seemed to hold out but little hope of success. It is an established rule in surgery, that where a single ligature is employed for the cure of traumatic aneurism, it should be applied as close as possible to the sac; and even where this is done how apt is it to fail? But, in the present case, the ligature would have been at a considerable distance from the sac, as the aneurism lay on the ulnar artery. It might, of course, be argued that, as compression of the brachial artery at a distance from the aneurism succeeded, ligature at the same spot would have done likewise; but there was this obvious advantage presented by the former method—that, if it failed, any other plan could have been resorted to, whereas, if the artery were tied, and that this proved ineffectual, to be obliged to have recourse to a second operation would not have been very desirable.

The third plan—that of laying open the sac, turning out its contents, and tying the artery above and below the wound in it, is certainly the most effectual of all the methods that can be adopted. This is, however, a very tedious, troublesome, and difficult operation; and, in the present case, such would have been particularly experienced, for the ulnar artery, where it was wounded, lies very deep, being covered by the superficial pronator and flexor muscles. Neither is an operation of this kind free from considerable danger as regards remote consequences.

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* See Dublin Journal of Medical Science, 1832, vol. i., p. 117.

Such were the objections which appeared against each of the methods stated, and the existence of which rendered it the more desirable that compression should succeed—and the more gratifying, that this occurred.

The points more particularly worthy of notice in the foregoing case are:—first, the novel method of compression which was adopted; second, the advantage of the pressure which the patient occasionally exercised with his fingers; third, the return of pulsation in the ulnar artery at the wrist after that in the tumour had ceased; fourth, the slowness with which the tumour was absorbed.

The method of compression which was carried out during a part of this case was never, so far as I am aware, resorted to before, and it is one well worthy of attention. It is a mode of commanding the circulation which can be adopted without any of that pain, inconvenience, or difficulty which attends the application of the ordinary clamps. The instrument which was employed, and which is delineated in the woodcut, is rude and imperfect; but it would require no stretch of ingenuity to construct a little apparatus, of a similar design, which would be more efficient for the purpose. In fact, compression, in the strict sense, is not required; it may be found, by experimenting with the fingers on the brachial artery at the lower third of the arm, that making pressure so as merely to produce a curve upon the vessel, with very little diminution of its calibre, will be sufficient to arrest the circulation. The simplest instrument, then, would be one consisting of a curved plate of elastic steel, the elasticity of which would be strong enough to command the artery, and thus the necessity of a screw might be dispensed with. The steel need not by any means be very strong; a tolerably thin plate will generally possess sufficient elastic strength for the purpose, except, perhaps, where the arm is of more than ordinary muscularity and thickness. An instrument of this description could be worn without any inconvenience for several hours consecutively, and might be turned to advantage in hæmorrhage from wounds of the hand and forearm, as well as in the treatment of aneurisms. In adjusting the instrument, the biceps and the artery should be first grasped with the fingers of one hand, and raised up together, so that when it is applied the pad will be somewhat below the level of the vessel, which will thus be pressed beneath or against the edge of the muscle, and be prevented from slipping away.

As to the advantage derived from the exercise of pressure by the patient's own fingers, this has been experienced in other cases as well as the present. The most remarkable instance of this sort was in the case of a man with popliteal aneurism, who was recently in Steevens' Hospital, under the care of Mr. Colles, and who succeeded in curing himself by making pressure with his fingers on the femoral artery in the groin. The particulars of this case are extremely interesting, and are to be found in the seventh number of this Journal. The efficiency of manual pressure has long since been attested by its results in secondary hæmorrhage, and there is no reason why advantage of the same should not be taken in the treatment of aneurisms. In fact, there is no means of compressing an artery so accurate and decisive, at the same time so free from pain, as the finger; and the only difficulty which lies in the way of its being carried out is the fatigue which is so soon produced, and which necessitates relays of persons when it is to be maintained for any considerable time. The maintenance of manual pressure by a succession of persons is, however, rarely required in cases of aneurism; but its occasional adoption, particularly by the individual himself, will be found of the greatest utility, if not perchance by effecting a cure, as in the case alluded to, by relieving the compressors, and by compensating, to a certain extent, for their imperfection, if such should exist. In the thigh manual pressure can be kept up but for a very short period, but in the arm, when it is carried out in the manner which has been particularly dwelt upon, it may be maintained far longer, with very little trouble.

The third point, to be specially noticed in Smyth's case—the return of pulsation in the ulnar artery when that in the aneurism had ceased—affords interesting matter for pathological speculation. Is this phenomenon, which has been often observed, merely the result of the establishment of the collateral circulation; or is it to be taken as evidence that the vessel becomes pervious when the aneurism has been partly absorbed, thus indicating that a punctured artery is not necessarily obliterated? That an artery but partially divided is not always obliterated, receives support from some experiments performed by Jones, many years ago, upon dogs, and also by what was observed in the two cases cured by direct pressure by Mr. Cusack—"the pulsation beneath the cicatrix remained strong and natural after the absorption of the tumour, in both cases." The same has been observed in other instances. In arteries of the size of the ulnar, however, it is far more consistent with the known laws which regulate the reparation of wounds of these vessels, to believe that obliteration always follows wounds of all kinds in them; accordingly the phenomenon of the return of the ulnar pulse in this case would be attributed, with more soundness, to the establishment of an active collateral circulation, than to the other supposition advanced.

The last point to be considered, the slowness with which the aneurism was absorbed, is, in a practical point of view, of far more importance than the former. The partial fluidity of the contents of the aneurismal sac is always a cause of its slow absorption; and this condition may remain alike after almost any method of treatment, whether compression or ligature, and it may occur both in the pathological and the traumatic form of aneurism. In a case of large popliteal aneurism, which was cured by compression of the femoral artery in a few hours, and the details of which I laid before the Surgical Society, at an early part of last session, the contents of the sac remained fluid for a long time after pulsation ceased; in fact, when the patient left the hospital, the tumour which remained yielded fluctuation over a considerable extent. It is not, however, merely that this condition of an aneurismal sac is unfavourable, by rendering it slow of removal, but there is always, under such circumstances, a tendency to a return of pulsation, and to the occurrence of suppuration, which is not the case where the sac becomes gradually filled up with fibrinous deposit. Hence the prognosis and subsequent management of a case of aneurism, after the cessation of pulsation in it, differ materially, according as the contents of the sac are partly fluid or entirely solid.

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# WHITWORTH AND HARDWICKE HOSPITALS.

## *Cases of Slow Copper-Poisoning, with Observations.*

BY DR. CORRIGAN,

PHYSICIAN IN ORDINARY TO THE QUEEN IN IRELAND.

The suddenly dangerous, and occasionally fatal effects which have resulted from the use of food cooked in copper vessels imperfectly cleaned, or still more often from incautiously allowing food, after having been cooked, to remain in copper vessels, are now so well known, and so much dreaded, that cases of copper-poisoning from these causes are of very rare occurrence.

The object proposed in the notice of the following cases is to draw attention to another form of copper-poisoning, which has hitherto attracted little, if any, attention, but which appears to deserve being recorded. This form, arising from the gradual absorption of copper, is slow in its progress, and is more likely to escape detection than poisoning in a similar way from lead, as it produces neither colic similar to lead-colic, nor paralysis, and, therefore, does not present those salient stages which attract observation in most cases of lead-poisoning. The slow copper-poisoning as surely, however, breaks up the system, although in a different way. While lead appears principally to produce its poisonous effects upon the nervous system, producing colic, constipation, and paralysis, copper, in its slow form of poisoning, exerts its deleterious influence mainly on the nutritive function, in its divisions of absorption and secretion. In all the cases of copper-poisoning which have come under my notice, there was exhibited a very peculiar feature, which does not appear to have been previously noticed, viz., an edging of rich purple on the margin of the gums of the incisor, canine, and bicuspid teeth of both jaws. This purple colouring of the margin of the gums coincides in situation precisely with the colouring produced by lead, but the tint of colour is so different as at once to decide whether it has proceeded from copper or from lead; for while the colour produced by lead is of a pure blue, that from copper is a well marked purple, and even sometimes a reddish purple. The carbonate of copper is the salt from which the poisoning appears to have proceeded in all the cases which have come under my observation; this would appear to show an analogy with lead, as, of all the salts of lead the carbonate is that from which its poisonous effects have been most often observed to proceed. In most instances of lead-poisoning, the carbonate had been previously prepared for use, and the workman has been exposed to its influence in using it as such. In many of the cases of copper-poisoning, the effects have been produced by handling old or dirty copper, on which the carbonate has been accidentally formed. This circumstance is calculated to conceal the nature of the cases from observation, as the pernicious effect of the carbonate, or rust, of copper is constantly varying, according as the copper may be more or less dirty, and as the time may vary during which the person is in contact with it.

Sulphate of copper, or blue-stone, is occasionally used, it is said, to make bread rise better in the oven, and look whiter. Whether the very small quantity used, and whether the salt itself, the sulphate, are poisonous, are points on which it would be premature to offer an opinion, but they are well worth observing, when we become aware of the injurious effects produced by the absorption of very minute proportions of the carbonate. The cases in this paper detailed are remarkable for their extreme slowness of progress resulting from the very gradual absorption of the poison, recalling to mind the alleged slow poisonings of the middle ages. The examples of copper-poisoning described in works on jurisprudence are usually acute, such as exhibited almost immediately unmistakeable evidence of the action of an irritant poison. On this account, and the insidious nature of their progress, the cases here narrated are deserving of attention :—

*Reported by* MR. SARGINT.

CASE 1.—Patrick Keogh, æt. 40, foreman at an ironmongery and brazing establishment, applied at the Whitworth Hospital, on 16th July, 1853. He complained of cough, profuse night sweats, occasional griping pains in the abdomen, and great loss of flesh and strength. He stated that he had been in perfect health until seven months before admission, when his attention was first attracted by the cough and abdominal griping pains; that these symptoms had gone on gradually increasing. He never had hæmoptysis.

On a most careful examination of his chest, nothing to account for the symptoms could be detected. On examining his mouth, the gums were found retracted from the teeth, and having a band of ulceration one-eighth of an inch broad, of a light purple colour, very different from the deep blue colour of lead poisoning. On questioning him closely, it appeared that all the old copper and brass used in the establishment passed through his hands, that these substances were generally covered with dust and verdigris, and that he frequently had to wipe them with his hands. Considering that this was a case of metallic poisoning, he was ordered five-grain doses of iodide of potassium, with occasional warm baths. Under this treatment he improved, though slowly; the colour of the ulcerated gums gradually faded, and he was discharged on the 28th July. At that time the night sweats had disappeared, the cough had become much less troublesome, the ulceration of the gums had disappeared, and he had gained flesh.

Case 2.—John Kiernan, æt. 38, a brass-founder, was admitted into the Hardwicke Hospital, in January, 1853, with simple fever, from which he soon recovered. His convalescence, however, was slow, and he complained of constant griping pains in the abdomen. His peculiarly cachectic appearance in his convalescence attracted attention. His gums presented exactly the same characters as those of Keogh.

January 24th, 1853.—He was transferred to the Whitworth Hospital, and treated with five-grain doses of iodide of potassium, three times daily, and warm baths. He recovered slowly, and was discharged, 8th February, 1853; the ulceration of the gums had disappeared, and he had become much more healthy looking.

Case 3.—Richard Connell, an engine driver on the Midland Railway, æt. 26, admitted into the Whitworth Hospital on January 30th, 1854, complaining of great loss of strength, pains in the joints of his upper extremities, irritability of stomach, especially after meals, and griping pains in his bowels.

He has a most unhealthy looking countenance, and his complexion is of a leaden hue. He complains of a hard, dry cough, and night sweats. Both sides of the chest are healthy, with the exception of the left side posteriorly inferiorly, where there is a fine muco-crepitus. The gums, both upper and lower, are ulcerated at their attachment to the teeth, the ulceration having a purple margin, and extending on each side to the first molar. His tongue is furred; pulse 90; appetite bad; bowels difficult to move. His occupation was, up to a short time before admission, to clean the brasses and coppers of his engine; having frequently to file copper and brass, he had his hands generally covered with a mixture of filings and oil, which also penetrated under his nails. He never perceived any ill effects from this, except occasional colicky pains, which were at times very severe, until six months before admission, when he got a severe wetting. Soon after the wetting, he found his strength gradually failing. Three weeks after he began to feel pains in his bones; soon after he was affected with cough, and from that time he lost flesh. He had constantly a feeling of chilliness over him. Soon after he was obliged to give up his employment, which several times he resumed, but was again obliged to give up from increasing weakness.

He was ordered five-grain doses of iodide of potassium three times daily, and a blister over the base of the left lung. Under this treatment, he rapidly improved, and on Feb. 18, 1854, he applied to be discharged, when the following note was taken:—He states that he has become much stronger; that the colicky pains have entirely disappeared. The ulceration of the gums still continues, but to a less extent; the purple colour still continues, but not so well marked. He was directed to continue the same medicine as before.

On March 12th, 1854, he showed himself at the hospital. The gums presented the same appearance; he stated that he had neglected taking his medicine; that for three weeks he had continued quite well, almost as strong as ever; that he then began to feel the pains in his abdomen, and that the cough had returned. He was directed to repeat his medicine. He did not return to hospital.

Case 4.— ——Connolly, æt. 30, chief engineer in a steamer plying between London and Hamburgh, applied for advice in February, 1854. He complained of loss of appetite, cough, night sweats, constipation, colicky pains. His lungs were healthy; he was slightly emaciated; his gums were retracted from the teeth, ulcerated, and presented a purple margin. He said that his hands were continually immersed in a compound of oil and copper or brass filings. He had not enjoyed perfect health for more than a year previously. He was ordered iodide of potassium, but having left the country, nothing can be known of the effect of the treatment till his return some months hence.

Case 5.—Matthew Kelly, æt. 24, admitted into the Whitworth Hospital, February 7th, 1854. Complains of cough, accompanied with viscid expectorations, occasionally tinged with blood.

Aspect rather unhealthy and pale; not emaciated. Gums ulcerated, margin purple, subclavicular region comparatively dull on percussion. In this region muco-crepitus is audible; expectoration slightly purulent. Is a shoemaker, and uses brass pegs, which he constantly files and puts in his mouth. Has been gradually losing strength for the last seven months, during which period he has had several attacks of hæmoptysis; within the last four months he has been attacked with pains in his shoulders and abdomen. He was ordered iodide of potassium, and left the hospital slightly improved, on March 12th, 1854.

*Reported by* MR. CURRIN.

CASE 6.—Peter Doyle, æt. 18, admitted into Whitworth Hospital, July 24, 1854; apprenticed to a brazier, employed in working upon and constantly handling old as well as new copper. His appearance is unhealthy, his complexion dark and sallow. He is emaciated, and on examining his mouth, the anterior gums present a peculiar purple-coloured margin, the teeth themselves are dark-coloured, and the gums are retracted. He complains of an habitual cough, generally dry, of his flesh wasting away, and of his muscular strength being greatly diminished, and of frequent pains shooting across the abdomen and under the ensiform cartilage. He says that three years ago he was in perfect health when bound to his trade. In eighteen months afterwards he began to cough, to feel pains, at first trifling, shooting through his body, and gradually his state became what it is now described.

July 26.—After having had some aperient medicine he was put upon the Mist. Potassii Iodidi of the hospital, of which the following is the formula:—

℞ Potassii iodidi ʒss.
Potassæ carbonatis ʒi.
Aquæ puræ ℥ix.
Tinc. aurantii,
Syrup. simpl. āā ℥ss. M.
℥i. ter in die.

He continued this, with intervals of aperient medicine as required, to August 9th, when the following was the report:—

His general appearance is much improved; he is almost free from pains; he feels himself much better in health and muscular strength, and cough is now very slight.

August 12th.—Discharged, as he felt himself able to return to work. Purple margin still marked on gums.

CASE 7.—A country shopkeeper consulted me some months since for a chronic and obscure affection. His appearance was remarkably cachectic, his abdomen large, he was reduced in strength, had lost appetite, and complained much of obscure and colicky pains shooting through the abdomen. His cachectic aspect presented so strong a resemblance to some of the cases I had already been familiar with, that I at once questioned him as to his occupation. He was not in the ironmongery or copper business, and dealt in soft goods. On examining his mouth, I found his gums retracted with the peculiar purple edge already described. I again questioned him, and then learned that he was in the habit, in the mornings, of buying from the hawkers, who came to him for goods, scraps of old iron, tin, copper, &c., and that as these were generally dirty, he handled them closely, and always rubbed the dirt and rust off with his hand preparatory to weighing them, and to ascertain the nature of the metal he was purchasing. I prescribed iodide of potassium, but I have not been able to trace the future progress of the case. There is sometimes considerable difficulty in tracing up cases of metallic poisoning to their source. In another case lately in the Whitworth Hospital, the patient, although presenting symptoms of lead colic and blue gums, assured us that he was neither a painter, nor was he exposed to lead—he was a sugar-stick maker. On further inquiry, however, we at length discovered that his branch was colouring the twisted sugar-sticks, which was done by turning the stick on a slab with the left hand, while the fingers of the right hand, dipped in a saucer of red lead or chromate of lead, were drawn along its edges. In another similar case the patient persisted for a long time in saying he was only employed in paving the streets, but at length acknowledged that he had been engaged in putting the white lead stuffing into the joints of gas pipes. He desired to conceal this, lest he should be blamed for having been working out of his own place.

If we review the above cases, there are some conclusions from them that we may now enumerate:—

1st. They show us that copper, or its carbonate, will act as a slow poison by absorption, undermining the constitution, producing emaciation, catarrh, and loss of strength, and leaving the system in a state little capable of resisting the ordinary exciting causes of many diseases.

2nd. The symptoms, although not acute, are well marked—emaciation, a cachectic appearance, loss of muscular strength, colicky pains, cough without physical signs to account for it, *and the peculiar characteristic sign of retraction of the gums, with a purple, not a blue edge.*

3rd. In none of the cases, although there was muscular debility, was there either acute colic with constipation, or the local paralysis that so often results from the poison of lead, and the colour of the gums was quite distinct from that produced by lead.

4th. Copper, in slow poisoning, seems to exert its deleterious influence mainly on the nutritious functions, or assimilation, including absorption and secretion; while lead acts energetically on the nervous system of both organic and animal life, exhibited in its action on the former by the obstinate constipation, and on the latter by the violent pains of lead colic, and by the production of its peculiar paralysis.

5th. The knowledge that copper, or its carbonate, is capable of acting by absorption as a slow poison, will be useful, as it may lead us to discover the nature of some apparently, at first sight, anomalous diseases that might otherwise elude our diagnosis. The tint of colour produced on the gums, whether by copper or lead, remains a very long time. It had not disappeared from any of the cases above narrated, as long as they were under my observation. In the case of a policeman who has been very lately in the Whitworth Hospital, the blue colour produced by lead was very distinct. He had been in the police force two years. Previously to his becoming a policeman he had been a plumber.

## WHITWORTH HOSPITAL.

### *Closure of the Gall Bladder and Obliteration of all the Ducts; Farre's Tubercle of the Liver.*

BY DR. GORDON,

PHYSICIAN TO THE HOSPITAL.

Cases of cancer of the liver occur in which, as Budd observes, the organ may be tripled in volume without jaundice, this symptom depending not so much on the size as the situation of the tumours. The following case, however, presents the exact condition which we would *a priori* suppose to give rise to this symptom; and yet it never existed. The case may be of some use in determining the symptoms which belong to obliteration of the gall bladder or ducts, even though, in the present instance, this phenomenon was combined with cancer of the liver.

Catherine Reynolds, æt. 63, was admitted into the Whitworth Hospital, July 10th, complaining of great swelling and pain in the abdomen; the swelling was in some parts very hard and resisting, in others soft and fluctuating; it was about a year since she first observed the increase of size; the pain was at times very severe and always referrible to the epigastric region; the appetite was very indifferent, but rather capricious; the bowels very constipated; urine very high-coloured, scanty, depositing the lithates in large quantity.

There was a large, irregular, indurated swelling in the right hypochondriac region, which, from its peculiar feeling, left but little doubt that the disease was what is usually termed Farre's tubercle of the liver; and this indurated swelling was continuous with another of similar induration in the left iliac region, while there was distinct feeling of fluctuation perceptible across the walls of the abdomen. She was pale and greatly emaciated, but could not be said to have the aspect of malignant disease. The diagnosis given was cancer of the liver, with ascites, and, most probably, cancerous disease of the left ovary. There were one or two remarkable features in the case worthy of observation. The vomiting appeared always to come on in paroxysms, and no medicine or application seemed of the least service in allaying it; when it had passed off she always said she was the better for it; the pain in the epigastric region was very constant, but at times greatly increased, and opium in any form, or to any amount, never relieved it; she derived most benefit from purgatives; and when the bowels acted either under their influence or otherwise, the stools were always white and without bile.

On the 9th of August she was attacked with a low form of peritoneal inflammation, and died on the 12th.

The liver was most extensively occupied with hard, white, scirrhous tumours, many of them projecting above the surface of the liver, rendering it of an exceedingly irregular shape—others confined to the interior; the postero-inferior portion seemed one mass of cancerous structure. The gall bladder, for some little time, could not be discovered; it was found, at length, in the centre of a cancerous tumour; it contained three biliary calculi, which were closely fitted into each other, and seemed highly polished; they weighed 3½ drachms, and were composed almost entirely of cholesterine; the coats of the gall bladder were very thick, perfectly empty of fluid, and its interior had a polished, glistening appearance; the cystic duct was completely obliterated; a very small probe could be introduced into the orifice of the common duct, but could not be passed on; the hepatic ducts were completely obliterated by the cancerous disease, and in the interior of the liver there was no appearance of their being enlarged.

The tumour in the left iliac fossa was the omentum, which had become adherent in this situation, and was extensively engaged in the cancerous degeneration, being adherent also to the inferior lobe of the liver. There was a good deal of serum in the cavity of the abdomen, with some recent soft lymph.

This case is strongly corroborative of the symptoms already adduced by Budd, as belonging to "closure of the common duct," with this addition, that jaundice is not a necessary consequence of obliteration even of the gall bladder and all the ducts.

## S FROM FOREIGN JOURNALS.

### *on Ascites treated by Iodine Injections.*

BY M. PAUL DARD,

TERN OF THE HOSPITALS AT LYONS.

an Inaugural Thesis lately laid before the
Faculty at Paris.]

ny purpose to enter on the discussion
arches already made regarding the
f dropsies by iodine injections, nor
o examine the interesting works
ı this question. I merely wish to add
ry of this method, the facts of which
ı witness during my internship in
ls of Lyons; to present, according to
M. Teissier, Physician to the Hotel-
reflections on the cases collected in
; and to lay down the rules for the
and contra-indications of this mode
ıt, as well as the quantity of the
iodine to be used, the precautions to
fore and during the injection, and the
ıent which the patients require.*
-Antoinette Roche, æt. 35 years,
lth had been good; menstruation
s had six children; all her confine-
ral. April 2nd, 1852, during the
nstruation, caught cold while washing
lt sharp pain in the hypogastric and
ons. The menstrual flow increased,
upervened ascites, with œdema of the
ı. The œdema soon disappeared, but
continued, the belly increasing in
patient entered the Hotel-Dieu of
y 5, 1852.
ission she presented the following
dulness in the lateral region,
ith the position of the patient; clear-
cussion in the umbilical region; some
but no abnormal sound connected
art or lungs; the digestive apparatus
ie liver and spleen of their natural
albumen in the urine. In fact the
ted without any appreciable organic
ıe patient, from the 5th of May (the
ission) till the 19th of July (the day
tion), was subjected to the following
first, nitrate of potass; afterwards,
potass with powder of squills. The
inuing to increase, blisters were ap-
he abdomen and jalap powder ad-
daily.
not being well borne, syrup of squills
l, and friction made with squills and
nercury, combined with squills and
ushed to salivation.

In spite of this treatment, the abdomen continued to increase in circumference.

Seeing the inefficiency of a line of treatment so varied, and lasting two months and a half, M. Teissier determined to practise the iodine injection on the 19th July. Puncture with an ordinary trocar gave exit to ten *litres*† of serous fluid, very albuminous and alkaline. The following was injected:—

| | | |
|---|---|---|
| Water, | 200 | grammes. |
| Tincture of iodine, | 50 | ,, |
| Iodide of potassium, | 5 | ,, |

The belly was kneaded for two or three minutes, and the half of the injected fluid was then allowed to escape. Sharp pains came on, which were followed by slight symptoms of iodic intoxication, during four or five minutes.

Next day the abdomen was rather painful, tense; some increase of heat of skin; pulse 96-100.

The patient slept during the night; has not passed water since the injection.

The third day the fever diminished; the patient has passed water, and the iodine was detected in it; its presence is discovered by adding to the urine some starch-water, and afterwards hypochlorate of soda.

The fourth day the abdomen was still painful; much iodine in the urine.

The fifth day, the patient improving, fever fallen, urine no longer contains iodine.

The twelfth day the belly began to diminish, and the general condition improves.

A month after, the belly was still rather large, but no sign of fluctuation, no tumours to be felt, or sign of adherence of the intestines to the abdominal wall; the patient can walk without pain or difficulty; asked to leave, being in a very satisfactory condition.

CASE 2.—Jeanne Poirieux, æt. 53 years, lived on the ground floor of a damp house in Lyons, on the left bank of the Rhone, in a quarter often flooded. Habitually subject to rheumatic pains; has not menstruated for two years; eighteen months ago the belly began to increase. She was admitted May 19th, 1852.

Dulness on percussion in the lateral parts of the abdomen; clearness in the umbilical region; undulation distinct; slight bronchitis; nothing the matter with the heart, nor with the digestive apparatus, except a tendency to constipation.

This woman can only walk with great difficulty, and supported by several persons. For a month and a half she was subjected to general treatment, as Case 1. Nitrate of potass, scammony, squills, and digitalis, &c.; these different means giving no result, M. Teissier determined to try the iodine injection.

On the 28th of June, a puncture was made on the right side, and about eighteen *litres* of serous

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es of ovarian dropsy treated with success by
on, and detailed in this thesis, are suppressed;
f the interest they possess, they are not con-
he important and still new treatment by in-
ites.

† A litre is equal to about 1.7 imperial pint, a gramme to about 15 grains.

fluid, albuminous, and slightly alkaline, were drawn off. After this a careful examination of the abdomen was made, without discovering any tumour; this ascites then existed without any appreciable lesion of any important organ. The following was injected:—

| | | |
|---|---|---|
| Water, | 200 | grammes. |
| Tincture of iodine, | 30 | ,, |
| Iodide of potassium, | 4 | ,, |

The belly was kneaded for two or three minutes, and about the half of the injection allowed to escape. The patient felt no pain, only a sensation of heat, very slight febrile disturbance, no increased heat of skin, pulse not above 80. Following day slept well, and took some soup with appetite. During four days the iodine was present in the urine. The belly, which had increased in volume after the injection, began to diminish.

July 15th.—Seventeen days after the injection, the patient walked alone, and without difficulty. She left the hospital at this period, in spite of the wish of M. Teissier, that she should prolong her sojourn.

Two months and a half after, she returned to let us know her condition:—The belly was still rather large, but no fluctuation: some traction towards the left side, where inequalities were to be felt; walking easily performed; digestion good; general state much improved.

Case 3.—Jeane Marie Maroyer, æt. 22 years. She had in her childhood ophthalmia, which has left marks on both corneæ. Her constitution, naturally bad, has been rendered worse by want, begging being her only means of gaining a livelihood. She was admitted August 31st, 1852. Five months ago her belly began to swell. On admission, there existed well characterized ascites; lateral parts of the abdomen dull on percussion; umbilical and epigastric regions resonant; breathing oppressed, but lungs and heart healthy. The digestive tube was the seat of chronic enteritis; urine scanty, containing some albumen and sugar.

The pathological condition of the digestive tube did not permit the use of active drugs; the patient daily becoming weaker determined M. Teissier to have recourse to the iodine injection, in order to arrest the progress of the disease.

On September 5th, twelve *litres* of serous fluid were drawn off. This liquid was very watery, and contained scarcely any albumen; for both boiling and nitric acid caused but a slight cloud. The fluid suddenly ceased to come out; it was in vain attempted to clear the end of the canula with a probe, from the obstacle that closed it. The folds of the intestine were applied against the canula: nevertheless, the following injection was thrown in:—

| | | |
|---|---|---|
| Water, | 200 | grammes. |
| Tincture of iodine, | 30 | ,, |
| Iodide of potassium, | 4 | ,, |

But little of the injection had entered, when the patient gave a cry; she felt acute pain. Still all the liquid was injected. After kneading the belly for two minutes, a vain attempt was made to abstract the injected fluid; the same obstacle opposed its exit. The patient continued to suffer sharp pain; pulse frequent, small and weak; skin bedewed with cold sweat. Warm blankets, jars, &c., were applied. The patient vomited several times during the day; in the evening was in a state of extreme agitation; pulse, 140. Frictions with mild mercurial ointment over the whole abdomen; cataplasms afterwards. The vomiting continued all night; in the morning she seemed calmer; pulse 130. Still acute abdominal pain: ordered a sedative draught, and two blisters to the legs; mercurial frictions continued. Towards evening, skin less cold; pulse 120; somewhat stronger; pain and agitation continue. The patient died during the night.

Autopsy made thirty hours after death.

Abdomen very large; the peritoneal fluid has a yellowish colour due to the solution of iodine; the peritoneum was the seat of general inflammation, most intense at the right side; on which side the puncture was made. Some little distance around the puncture, the peritoneum was black, but not gangrenous. The loops of intestine which directly received the injection were the seat of much more acute inflammation. The small intestines were, at some points, covered by a plastic exudation. The mucous membrane of the digestive tube showed traces of inflammation in its entire length, especially the large intestine, which was thickened, softened, but free from ulceration.

No appreciable lesion of either the liver or heart. In the pelvis were found false membranes, and in the hypochondria. These adhesions were soft, easily torn, and formed a gelatinous mass, uniting the abdominal wall and its contained organs. No trace of suppuration, nor anything indicating that pus was about to form.

The author here details four successful cases, which we abbreviate:—

Case 4.—Emilie Chauler, æt. 21 years, of a lymphatico-sanguineous temperament; menstruation, which commenced at fourteen years of age, was at first difficult and irregular, but ultimately became quite regular.

In 1850 the abdomen began to enlarge without any appreciable cause, and eighteen months after the commencement of the disease, she came to hospital, being alarmed at the progress it had made.

On December 2nd, 1852, she was admitted. Careful examination failed to detect any cardiac or pulmonary disease; the liver and spleen seemed to be in their normal state; no trace of albumen in the urine, or other sign of renal disease.

The conclusion arrived at was, that it was a case of simple ascites, without appreciable lesion, and probably connected with the previous derangement of the menstrual function.

This patient has been for two years subjected to all the general treatment adopted in such cases, as diuretics, purgatives, blisters, &c., without deriving any benefit therefrom. The iodine injection was determined on. On the 6th of October, in presence of M. Bonnet, M. Teissier performed paracentesis on the right side, withdrawing sixteen *litres* of perfectly limpid fluid, slightly albuminous and remarkably alkaline.

The following injection was thrown in:—

| | | |
|---|---|---|
| Water,............ | 125 | grammes. |
| Tincture of iodine,.. | 30 | „ |
| Iodide of potassium,. | 3 | „ |

Great pain and alarming depression followed: one hour after the injection the iodine was found in the urine. On the 24th of October, eighteen days after the operation, the patient left the Hotel Dieu in a very satisfactory state.

M. Teissier saw her afterwards, October 16, when she continued well, and after several months, having regained all her strength, and being able to walk well and without fatigue, she returned to show that the cure was maintained.

Case 5.—Mlle. D. of Belley, æt. 48, has been, since 1840, the subject of an ascites, consequent on chronic enteritis. The enteritis subsided, but the ascites continued, and acquired a very considerable volume.

She entered the Hotel Dieu of Lyons, March 20th, 1853. M. Teissier having examined the patient repeatedly with the greatest care, and being convinced the dropsy did not depend on any organic lesion, determined to try the iodine injection.

March 22nd.—Fifteen *litres* of serous fluid were drawn, and about four *litres* being allowed to remain, the following was injected:—

| | | |
|---|---|---|
| Water,............ | 100 | grammes. |
| Tincture of iodine,.. | 25 | „ |
| Iodide of potassium, . | 2 | „ |

Only twenty-five grammes of tincture of iodine were used, because the fluid drawn off but slightly alkaline, and not very albuminous. The patient felt so little pain that we feared that the inflammation was not sufficient to obtain a cure; ten days after, however, the absorption of the fluid left behind commenced.

The patient returned home well; we often hear of her; and, up to the present time, the cure is well kept up.

Case 6.—Anne Tiezet, æt. 44, habitually healthy, has had three children; for six years has been subject to leucorrhœa during the menstrual period, at which time she suffered from pain in the hypogastrium and loins.

Four years since, without any other cause, the belly began to swell; this increase was accompanied with pain in the umbilical region. From this time the abdomen continued to increase in size; walking became difficult, and respiration oppressed. She consulted several physicians, who tried blisters, purgatives, diuretics, &c. One applied caustic potass over the abdomen; but all these means failed.

She was admitted May 31st, 1853. The dropsy was of four years' standing, and accompanied with considerable tension of the abdominal walls. The want of success in the former treatment, and the freedom from disease of the heart, lungs, digestive tube, and kidneys, decided M. Teissier to try the injection, in spite of the opinion that the ascites to some extent owed its origin to chronic metritis.

On June 8th, ten *litres* of viscid, very albuminous fluid were drawn off, leaving about two *litres* in the abdomen, into which the following was thrown:—

| | | |
|---|---|---|
| Water,.............. | 125 | grammes. |
| Tincture of iodine, .... | 33 | „ |
| Iodide of potassium,... | 2 | „ |

The entire injection was allowed to remain; hardly any pain followed. The patient showed some signs of iodic intoxication.

The next day, pulse 95; abdomen not tender on pressure; abundance of iodine in the urine.

On the twelfth day, the patient wished to go out, and could not be kept; she got up and walked with facility. Some time after her exit she was heard of, and continued well; but it is not known whether at present the effusion of fluid has returned.

Case 7.—Marie Rosier, æt. 39 years, residing near Lyons. Eight years ago she had, in consequence of her third accouchement, some pains in the hypogastrium, which afterwards became diffused through the entire abdomen. At this time the belly began to enlarge, and she experienced difficulty either in walking or standing for any length of time. Four months after her confinement she became pregnant for the fourth time. The effusion of fluid continued to increase, and eighteen months after she was tapped, and all the fluid evacuated. It rapidly reaccumulated, and after six months she was again tapped.

The fluid continuing to reaccumulate, paracentesis was eight times performed. Eleven months ago she proved pregnant for the fifth time. During this pregnancy she was four times tapped. She constantly kept her bed, and the accouchement was favourably terminated two months since, when she was admitted to the Hotel Dieu.

On admission, the abdomen was large; dulness on percussion in the lateral regions, changing when the patient alters her position; clearness in the umbilical region; undulation manifest. No lesion could be detected in the digestive tube or its appendages; the liver and spleen of their normal volume; heart and lungs healthy; slight mucous deposit in the urine; neither nitric acid nor boiling detects any urine in it; skin soft, but never perspires; general condition good, except for slight emaciation.

For several years this woman has in vain undergone all modes of treatment within the reach of therapeutics. On the 27th of September, six days after her entrance, a puncture was made, and fourteen *litres* of limpid fluid, alkaline, but very slightly albuminous, were drawn off: after the first four or five *litres*, the fluid came bloody, and towards the end they again became limpid.

The following was injected:—

| | | |
|---|---|---|
| Water, | 125 | grammes. |
| Tincture of iodine, | 30 | ,, |
| Iodide of potassium, | 4 | ,, |

The belly was kneaded for two or three minutes; the patient felt no pain. A little of the liquid was allowed to escape, and on seeing that the iodine was neutralized by the alkaline serum, a second injection was immediately made of

| | | |
|---|---|---|
| Water, | 50 | grammes. |
| Tincture of iodine, | 10 | ,, |
| Iodide of potassium, | 1 | ,, |

The kneading of the abdomen was repeated; all the liquid was left in the abdomen. Five hours after the injection, some symptoms of iodic intoxication manifested themselves; but no abdominal pain.

Next day the pulse was 112; the belly not painful; iodine in the urine.

Third day.—Slight pain in the belly; urine contains much iodine.

Fourth day.—Pains gone; urine contains less iodine.

Seventh day.—No longer any iodine.

On the twelfth day the patient was up, and wished to leave the hospital, but was induced to stay. On the twentieth day (October 16, 1853) the patient left the hospital.

She returned to hospital again, March 2nd, 1854, five months after the injection. Before the iodine injection the intervals between the tappings were always becoming nearer to each other, until at last it was performed every six weeks. M. Teissier made a second puncture; left about one *litre* of fluid in the abdomen, and injected

| | | |
|---|---|---|
| Water, | 100 | grammes. |
| Tincture of iodine, | 50 | ,, |
| Iodide of potassium, | 4 | ,, |

All the injection was left in the peritoneum. The consequences were no worse than the first time; the injection being stronger caused more pain, but not insupportable. In a fortnight she went home. When she left hospital, her belly, which had increased after the injection, was diminishing.

We know not if this time the cure will be permanent. Two months after she was heard of, and the fluid had not commenced to reaccumulate. We do not expect the reproduction of the fluid, even if it does occur, to take place till a longer time has elapsed.

Of the seven preceding cases one only was unsuccessful; and in that the rapid death was without doubt due to the irritant action of the iodine, carried directly on the intestine. We shall afterwards dwell on the valuable deduction to be drawn from this case.

The seventh case gives the history of a woman attacked with dropsy for eight years; fourteen times tapping was performed; the intervals between the operations of late being only six weeks; after the injection, the return did not take place for six months.

In the face of such results, what is to be said of the medical prejudice, that all foreign bodies introduced into the peritoneum bring on such fearful symptoms, that such cases always terminate fatally? We have seen in the service of M. Teissier two cases, one quite recently, in which the injection of iodine into the pleura was followed by the most complete success.

1st. *Indications and Contra-indications regarding the Use of Iodine Injections.*—Injection ought to be had recourse to when the means usually employed have failed. It should be adopted in cases of ascites without appreciable organic disease, which seem to depend on irritation of the peritoneal serous membrane: an irritation rarely primitive, usually consecutive, following menstrual derangement, dwelling in damp places, or inflammation of neighbouring structures, as enteritis, for example.

If in symptomatic ascites the primitive lesion has disappeared, and the ascites remains, the injection of iodine should be had recourse to. However, even when the cause of the ascites continues, if a considerable effusion of fluid compresses the viscera, and causes inconvenience by its volume, the attempt may be made by the use of the iodine injection, so to modify the surface of the peritoneum, as to diminish the abundance of its secretion, and give comfort to the patient; since, by the means we are about to indicate, freedom from danger is assured.

The persistance of the lesion, which keeps up the derangement of secretion, as enteritis, is a contra-indication.

The existence of any lesion having its seat in the kidneys, or causing any obstacle to the flow of the venous blood, is a contra-indication. Modifications arising in the quality of the blood, under the influence of tuberculous cachexia, scurvy, &c., are contra-indications.

2nd. *Precautions to be taken before injecting, and Indications as to the Quantity of Tincture of Iodine to be used.*—If the ascites be very voluminous, a puncture is first made to lessen the extent of the peritoneal surface, and in consequence, the extent of the inflammation which the tincture of iodine ought to excite.

It is necessary, and this is of the first importance, not to withdraw the whole of the ascitic fluid. One or two *litres* ought to be allowed to remain, so as to bring the tincture of iodine uniformly in contact with the whole of the surface of the peritoneum, and prevent its immediate contact with this membrane, which will give rise to fatal peritonitis.

The examination of the fluid is very important. Usually it is alkaline and albuminous, and contains sometimes a little fibrine. The iodine will combine with the alkalies to form iodides of sodium and potassium; in fact, if some tincture of iodine be poured into the serosity of ascites, the iodine entirely disappears. Therefore, the more alkaline the liquid, the more tincture of iodine is necessary.

It is well known that iodine has the effect of rendering fluid the compounds of albumen and fibrine; so that the quantity of tincture of iodine must be proportionate to the albumen. This action of the iodine facilitates the absorption of the portion of fluid left in the abdomen.

If the liquid is but slightly alkaline, and slightly albuminous, twenty-five to thirty grammes of tincture of iodine may be injected. If the fluid be very alkaline and very albuminous, the dose will vary from forty to fifty grammes. In doubtful cases, it is better to use a less quantity. The total amount of injection ought not to exceed 250 grammes.

3. *Of the Precautions to be taken during the Injection.*—All the injection should not be thrown in at once, but it should be made to enter gradually into the peritoneal cavity; the assistants should knead the belly; the canula should be left in for a quarter of an hour at least.

When the injection is completed, if the patient feels no pain, a little of the liquid is allowed to flow out; if the tincture of iodine is found to be wholly neutralized, a second injection is made. If, on the contrary, the pain during the injection be very acute, cease to inject; if after the injection it is very acute, withdraw some of the liquid, an indication not always easily followed.

4. *After-Treatment.*—The consequences of the injection are usually very simple; it is only necessary to watch the patient, interference is rarely required; however, if the inflammation be very intense, it is to be combated by leeches, free inunction with mercurial ointment and extract of belladonna, equal parts, &c.

Slight symptoms of iodic intoxication sometimes arise, but pass off in a few minutes.

The iodine should be sought for in the urine; sometimes it is detected in that secretion an hour after the operation.

When the absorption of the fluid commences, this should be assisted by any suitable means of treatment.

*Action of the Tincture of Iodine.*—How does the tincture of iodine act? Either specifically changing the vitality of the peritoneum, and re-establishing the equilibrium destroyed by the want of harmony between the secretion and absorption, or it acts as an irritant, and determines a modification of an inflammatory nature. Without denying the first explanation, we prefer the second, founding our opinion on the state of the pulse, the abdominal pain, &c., which indicate slight peritonitic inflammation. The tincture of iodine further acts on the ascitic fluid, facilitating its absorption.

*Conclusions.*—Iodine injections may be performed in cases of ascites, with appreciable organic lesion, and exceptionally in other cases, in each after other means have proved insufficient.

The whole of the fluid is not to be evacuated.

The dose of tincture of iodine cannot be laid down in an accurate manner, since the composition of the injection varies according to that of the ascitic fluid.

The rapid elimination of the iodine is a good prognostic.—*Revue Médico-Chirurgicale, July,* 1854.

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## BIBLIOGRAPHY.

*The cheapest and most nutritious Food for Charitable Institutions and the Poor; being the Result of an Inquiry, made by Desire, on the Food supplied to the Hill-street Female Refuge.* By C. H. F. ROUTH, M.D., M.R.C.S.E., Physician to the Refuge and the St. Pancras Royal General Dispensary, &c., &c. London: H. K. Lewis.

This is a little book with a modest title, professing to be only the result of an inquiry into the food used at a particular institution, but it contains much more than it professes, and is really a most valuable compendium on food, and the principles which should regulate its quality and quantity, founded on scientific analysis, with all its latest discoveries. It is a book, too, which, although partly treating the subject popularly, gives the scientific information fully and correctly, never descending to the level of a mere popular treatise. We think this book will be found a most useful work of reference by public boards, medical officers, both civil and military, who have so often to regulate the diet of numbers, or to vary it according to locality and nature of supply; and we hope Dr. Routh, in bringing out another edition, will give it the more enlarged and proper title of "An Essay upon Food: its Quality and Quantity," or some similarly expressive description.

Dr. Routh, in the outset, lays down this simple proposition, that the human frame consists of two portions: the solid bone, muscle, brain, sinews, cartilage, &c.; and the fluid portion, the blood; that the solids must all be formed from the blood, that the blood must contain all the varied elements necessary for the combination of the solid portions; that it can only obtain them from the food, and that hence arises the necessity for food of various kinds, or containing many elements; and from these preliminary propositions he works out pleasingly and plainly the rules that determine the quality and quantity of food.

We would particularly draw attention to the observation on the supply of food, as to quality and quantity, to growing boys and girls, on which there is so much lamentable error in both public and private; an error, the fatal effects of which are too often seen only in after life, when the bad results, stunted growth or scrofula, cannot be remedied.

The observations upon bread in its white and brown states—in the relative value of the various kinds of grain and vegetables, tea, coffee, cocoa, &c., showing their relative nutritive properties, are well and clearly put, while the distinction preserved throughout of nitrogenous or nutritive elements for support of nutrition, and carbonised or combustible elements for support of animal heat, brings forcibly before the mind the necessity for supplying both in certain proportions, and the rules on which the proportions are to be formed. We have no room for extracts, but we can promise our readers most useful information in the perusal of Dr. Routh's little work.

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## SUMMARY.

*Albuminuria in Pregnant Women.*—The frequent presence of albumen in the urine of pregnant women is a remarkable fact. It has been attempted to explain it in various ways, but mostly without reference to any other condition than that of the mother individually. Dr. Lever, who was the first to point out the fact of the co-existence of puerperal convulsions and albuminuria, still adheres to the opinion that the presence of albumen in the urine of pregnant women is to be accounted for on the principle of mechanical obstruction to the function of the kidneys, created by pressure of the gravid uterus upon the kidneys and emulgent vessels. And yet it is certain that this phenomenon is occasionally observed at periods of pregnancy, and under circumstances which do not admit of this explanation. The real cause must be sought elsewhere. The albumen found in the urine is the result, and an indication, of the degradation of the mother's blood, wrought, chiefly at least, by the abstraction of its healthy elements in the placenta, and the reception of the effete materials of the fœtus, discharged into it through the same organ. It frequently, indeed, occurs also, that the womb, enlarging, encroaches on the space required for the perfect play of the abdominal and thoracic organs; and that an increasing indisposition for exercise augments the difficulty of ridding the blood of its impurities by means of excretory glands, and of replenishing it by the assimilation of new materials; and that there are thus superadded other causes of deterioration. It can scarcely, however, be disputed that the first origin of the contamination lies in the embryo and its appendices.—*Brit. and For. Med. Chir. Rev. July*, 1854.

*Cases of Chylous Urine.* By H. Bence Jones, M.D., F.R.S.—In the interesting case of chylous urine recorded in the 'Medico-Chirurgical Transactions' for 1850, a most remarkable cure seemed to have been effected by the use of gallic acid. This cure, however, was not permanent; on the re-appearance of the symptoms, gallic acid was again resorted to, but with less benefit. The following table gives the particulars at a glance:

"After the original attack had existed more than 10 months, the

| | Days. |
|---|---|
| Urine was found to be chylous for . . . | 101 |
| It then became healthy, after gallic acid, for . | 232 |
| Then, in the first relapse, the urine was chylous for . . . . . . . . | 2 |
| It then became healthy, after gallic acid, for . | 80 |
| Then, in the 2nd relapse, the urine was 6 days clear, chylous for . . . . . . | 15 |
| It then became healthy, after gallic acid, for . | 237 |
| Then, in the 3rd relapse, the urine was chylous for . . . . . . . . | 2 |
| It then became healthy after no gallic acid, for | 16 |
| Then, in the 4th relapse, the urine was 1 day clear, chylous for . . . . . . | 125 |
| It then became healthy, after gallic acid, for . | 534 |

"During and after the original attack, the quantity of gallic acid taken was about 5 oz.

| | | | | |
|---|---|---|---|---|
| „ | „ | 1st relapse, | „ | 7 drs. |
| „ | „ | 2nd relapse, | „ | 3 „ 5½ „ |
| „ | „ | 3rd relapse, | „ | none. |
| „ | „ | 4th relapse, | „ | 30 „ 3 „ |

Total amount of gallic acid taken, nearly 40 oz." (p. 90.)

The gallic acid is, therefore, Dr. Jones remarks, no specific, though its beneficial action as an astringent is obvious. Tannic acid was used, but caused more nausea and headach than the gallic acid.

In the second case, the gallic acid evidently was of little use, but tannic acid and alum were of greater benefit. The disease, as usual, was greatly augmented by fatigue.

The third case, in which only one dose of gallic acid was taken, is recorded to show the length of time the disease can last. The first appearance of the chylous urine was in 1827; with various remissions, it was still chylous in 1853, when the last record of the case was made. Out of these 26 years, the urine had been chylous for 13 years. From 1846 it has been constantly chylous. In 1851 the patient (a lady) was aged 57, and weighed 14 stone. There was pain over the kidneys, but otherwise the health was good. —*Ibid.*

*Hyperæsthesia Psychica.*—"I apply the term hyperæsthesia psychica," says Romberg, "to that frame of mind in which abnormal sensations are excited and maintained by directing the attention to impressions; it is commonly called hypocondriasis."

The classification of hypocondriasis with mental disorders has been admitted by the best authorities. There is often, however, in these cases, great difficulty in estimating the *rapport du moral et du physique.* Romberg treats of the subject but from one point of view, and sees in the functional and organic changes which often occur with hypocondriasis, only so many results of a psychical hyperæsthesia.

"Structural changes supervene in those organs which have hitherto been the stage upon which so many sensations, determined or increased by the patient's attention, have appeared. Thus, a new period of the disease commences. The digestive organs, the liver, the stomach, the spleen, and intestinal canal, most frequently become the seat of the affection. Tumefaction or induration of the organs may be recognized by palpation and percussion. Hypertrophy and dilatation attack the heart, and tubercle is deposited in the lungs. The organs of sense and the brain are less frequently affected. The constitutional symptoms correspond to the local malady. The complexion alters, nutrition becomes impaired, and hectic follows; but through the chaos of symptoms, the red line of hypocondriasis may be traced; the sensations that are really present are increased, and new ones are generated by the power of the imagination. The older physicians distinguished between hypocondria cum materiâ and hypocondria sine materiâ, a distinction which is still admitted. The former is considered to depend upon somatic changes, and especially upon disturbances in the organs of digestion and the abdominal circulation; while the latter is stated to be an independent mental affection. No great acumen is required to see the mistake here committed; it results from the history of the disease having been severed, and the successive stages having been treated as distinct conditions. Hypocondriasis can only be said to exist if the mind create new sensations, which, in their turn, give rise to nutritive derangements."—*Ibid.*

*Fatty Liver.*—Fat may be found in the liver constituting its sole structural change, or it may form one of a series of important alterations which the organ has undergone from inflammation, cirrhosis, cancer, &c. In the former case it is the primary, in the latter a secondary affection. Gluge, however, has included all the conditions of the liver where fat is present under one disease, which he has termed "stearosis," considering the nutmeg liver, fatty liver, lardaceous liver, and cirrhosis, as merely different degrees of development of one and the same disease. Reinhardt, on the other hand, regards the presence of fat as the result of a retrograde nutrition, which occurs with the greater facility under the influence of hyperæmia or inflammation, in which case it is secondary to these affections.

The primary form of fatty liver—*stearosis proper*—gives rise to no symptoms of importance; even tumour is rarely ascertained, except in the last stage, and the margin of the liver, though mostly rounded, sometimes retains its natural sharpness. In the absence of symptoms, the diagnosis must be assisted by a consideration of the circumstances under which the disease is known to occur—namely, in phthisical patients, and in indolent gourmands, especially in those who take much fatty matter in their food, and indulge in alcoholic potations. When occurring in phthisical individuals, it is more frequently observed, according to Home and Louis, in females than in males; and, according to Dr. Budd, we may assume its presence whenever, in a consumptive female, a considerable painless enlargement of the liver is observed without accompanying ascites. When arising in indolence and overfeeding, it is usually conjoined with a simultaneous increase of the subcutaneous fat. The physiological experiments of Magendie, Gluge, and Thiernesse, have shown how fatty liver may be produced artificially in animals by feeding them with fat, or by injecting it into the vessels; and Gulliver and Virchow state that the fat is always first deposited in the immediate vicinity of the branches of the portal vein. The treatment of the disease, when arising from this cause, consists in the avoidance of fatty matters in the food, and of fermented liquors, in early rising, and exercise, and in the use of alkalics and alkaline mineral waters.

In that form of fatty liver, however, which complicates phthisis and other diseases, the resources of art are powerless.

Among the diseases with which it has been noticed as associated, but with too little constancy to assist in its diagnosis, may be mentioned carcinoma, various diseases producing emaciation, chronic diarrhœa, and dysentery. Rilliet and Barthez have observed it in children, quite apart from tuberculosis, after smallpox, measles, scarlet fever, and typhus; Biett and Rayer in chronic pemphigus; and Bright in a case where death had been occasioned by an extensive burn.—*Ibid.*

*Hydatid Disease of the Liver.*—Of all the diseases of the liver, with the exception of fatty degeneration, none arises and pursues its course with so little general or local disturbance as this. It is distinguished by the signs of enlargement, the characters of the tumour, and the absence of occasional symptoms, such as pain, which cancer is apt to occasion. Even the enlargement may not be palpable below the margin of the ribs, the right cavity of the chest alone being encroached upon, and under these circumstances the symptoms that arise may be referrible rather to the thoracic than the abdominal organs. The tumour, when palpable through the soft parietes of the abdomen, mostly exhibits the smooth semi-globular form of the dydatid sac, in consequence of its projection more or less above the surface of the liver. Sometimes this projection may be as hard as a cancerous tumour, from having been the seat of a calcareous deposition; but for the most part there is a peculiar tense elasticity, observed on pressing it with the finger, which is very distinctive, and in Dr. Henoch's opinion and our own, is more generally applicable to the purposes of diagnosis than the hydatic fremitus of Piorry. Dr. Henoch's assertion respecting the great rarity of the last-mentioned sign is confirmed by our own experience; its existence, however, is not to be denied, nor yet its value when it is perceived. Hydatid disease often undergoes a natural process of cure, by the secretion of a plastery matter from the interior of the sac, which exhibits, under the microscope, not only particles of fat and plates of cholesterine, but also the characteristic hooks or other remains of the dead echinococci. In other instances suppuration occurs, which may so completely destroy the hydatid, that only the discovery of the indestructible hooks can demonstrate the origin of the disease.—*Ibid.*

*Of the Use of Chloride of Ammonium in Chronic Bronchitis.*—This salt, according to Dr. Delvaux, when introduced into the stomach in large doses, causes very serious symptoms and even death. On opening the body of an animal so killed, the mucous membrane of the stomach is found marked over with a great number of small gangrenous ulcers. Lately, he says, I have much employed it in certain chronic diseases, and I have been greatly struck with the good effect it has produced in chronic bronchitis. In more than twenty cases that I have observed during the late winter, I have obtained if not complete cures, at least very notable amelioration. The individuals subjected to treatment had been long suffering from chronic bronchitis; the general symptoms they offered were emaciation more or less considerable; dyspnœa; cough very frequent, and preventing the patient from sleep; râles through all the chest, and loss of appetite. The dose of the chloride is from 15 to 40 grains in the twenty-four hours. Before its employment I give always a purgative, and I prescribe a *régime* more or less severe, for one or several days; under the use of the chloride of ammonium the dyspnœa diminishes, the cough becomes less fatiguing, and the appetite returns. The patients treated by me have never suffered from pain in the stomach or gastric irritation; but copious perspiration and abundant flow of urine are sure to follow after 24 or 36 hours' use of the remedy. Sometimes, after some days of its use, a slight febrile attack supervenes, but on suppressing the administration of the salt, these symptoms disappear.—*Presse Med. Belge.*

*Remarkable Development of Intelligence in a Cretin during Hydrophobia.*—By M. Niepce.—Antoine Chauvet had been a cretin from birth, and at the age of 17½ years presented, in a marked degree, all the physical and mental characters of cretinism. He could only articulate a few words imperfectly. He had not sufficient intelligence to learn reading or writing, nor to understand the catechism. His affections were little developed; he had some liking for his mother, but showed none for his brother. On the 10th of May last he was bitten by a mad dog; the wound was slightly cauterised with some drops of ammonia by a druggist, about an hour after the accident. Nothing was observed till the 27th July, following, about eleven o'clock, when Chauvet refused to eat or drink; and two hours afterwards all the symptoms of hydrophobia made their appearance. From the commencement of this disease, to the great astonishment of every one, Chauvet spoke with much greater facility than he had ever done before, addressing those around him, and relating the sufferings which he felt. In the intervals of the paroxysms, he called his mother and brother, showing his affection for them by the most tender caresses, and entreating them not to leave him alone. He caused the priest to be sent for, and on his arrival expressed with tears his bitter regret that he had never been able to learn the catechism. During the remainder of his illness, his intelligence became always lucid during the paroxysms of suffering, when he would put questions to those around him and give directions to them; but as soon as calm or depression ensued, the natural state of his intellect returned. On the 1st August, acute delirium came on, during which he spoke frequently and with volubility, citing facts which had happened several years before, and to which he had never seemed to pay attention. The delirium lasted till night, when it was succeeded by deep coma. He died at five o'clock on the following morning.—*Gaz. des Hôp., August* 27, 1853, *and Edin. Monthly Jour., May,* 1854.

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## MEATH HOSPITAL.

### *Case of Anæmia, Cardiac and Venous Murmurs; Visible Pulsation of Arteries; Diarrhœa; Tumour in Lumbar Region.*

BY DR. LEES,
PHYSICIAN TO THE HOSPITAL.

*Reported by* Mr. Charles James Egan.

John Murphy, aged 55, a carpenter, residing in Strand-street, admitted to the Meath Hospital on the 25th July, 1854. States, that for the last twenty years he has been of temperate habits, and enjoyed perfect health until about ten months since, when he was attacked with pain in the right hypochondrium, flatulence, and diarrhœa. Whenever this was checked slight swelling of the abdomen and feet ensued. On admission he complained of pain in the right hypochondrium, flatulence, and diarrhœa; palpitation of the heart and throbbing of the carotids comes on after walking up stairs, and swelling of the feet is brought on by exercise.

He has a very pallid, exsanguineous appearance, and is much emaciated. His skin is slightly yellow, and never moistened by perspiration. Pulse 60, soft and regular; there is visible pulsation of the radial, brachial, and carotid arteries. The action of the heart is regular, with a murmur of rather a rough tone accompanying the first sound, both at the apex and base, but heard most distinctly at the apex and in the horizontal position, though not lost when he stands up. There is also a distinct murmur attending the pulsation of all the large arteries, and a continuous hum heard in the jugular veins. There is no difference on percussion of the two sides of the thorax, and the respiratory murmur is natural. There is some effusion into the abdomen and tunica vaginalis, and a well-defined tumour, about the size of a walnut, can be felt in the right lumbar region anteriorly, yielding a dull sound on deep and strong percussion, though a clear sound can be elicited by light percussion, as if given from the colon lying in front of it. There is also clear sound on percussion between it and the edge of the liver. The tongue and gums are remarkably *pale*, clear, and smooth; appetite good; bowels moved about eight times daily; the evacuations are watery, but of a yellow colour; the urine is plentiful, very clear, acid, and of low specific gravity, but without any deposit, and not changed by heat or acid.

He was put on ten grains of Dover's powder at night, and a mixture of quinine and iron, with wine and good diet; under which treatment the murmurs disappeared and he gradually recovered.

This is a very good example of that condition of the system termed anæmia, a name introduced into our nosology by Andral, and which is used to express a state characterized by diminution in the blood-globules. This alteration is constant, and has been proved by Andral and Gavarret to be its fundamental character, while the fibrin, albumen, and the other solid principles do not necessarily undergo any alteration, unless the anæmia be caused by sudden great losses of blood, when there is then also great diminution in the quantity of fibrin. The serum, however, augments in proportion as the globules diminish, it becomes more watery, and contains less soluble salts. To understand the subject properly, it will be better to consider it under two heads. One we will term Hæmorrhagic, as in it the loss of globules is due to direct abstraction of blood from the system, and this may be either Traumatic or Idiopathic, as when hæmorrhage occurs from the uterus, rectum, stomach, lungs, or even from the nose;' while in the second form, which we will term Non-hæmorrhagic, the deficiency of globules is owing to some defect in hæmogenesis; and this form may be divided into Idiopathic and Symptomatic. By Idiopathic anæmia is meant that form of the disease which is not connected with any organic lesion, or local disease in the system, but which is caused by some general morbid influence deteriorating the blood, as from living in an unhealthy atmosphere, being deprived of solar light, or of proper food, dissipation, any debilitating cause, a too sedentary life, or even the habit of sitting up very late (especially if the time be spent in crowded rooms), may give rise to it. This is the form to which young females are subject, and which is often denominated Chlorosis. I shall not allude to this form at present, but proceed to the consideration of that termed Symptomatic, when the anæmia occurs secondary to cancer, tuberculosis, albuminuria, or other diseases (curable as well as incurable) of the heart, lungs, stomach, or bowels, as in the above detailed case of Murphy, in whom the characteristic appearances, the symptoms and physical signs have been well described by Mr. Egan. There are some points, however, in this case especially worthy of notice, as involving nice questions in diagnosis. The first point to determine was, whether the murmurs heard over the cardiac region were organic, or merely functional. We had a well-marked systoli murmur, of rather a rough character, heard *both* at the base and apex of the heart, and distinct one from the other, the pulse being only 60. Now Dr. Hope states, "that inorganic murmurs are always of a soft blowing character, and confined to the aortic orifice." Dr. Walshe observes, "that, according to his experience, they are invariably basic in seat; and Dr. Hughes, of Guy's Hospital, states, that he never heard an anæmic murmur with a slow pulse. If I had been guided solely by these opinions, I would have pronounced the murmur heard at the apex of the heart to have depended on organic disease of the mitral valve; but the aspect of the patient, the condition of the urine, the fact of the murmur being greatly lessened on his assuming the erect posture, and the presence of loud continuous musical murmurs heard in the vessels of the neck, made me diagnose the case as anæmic, and the systolic murmur heard at the apex of the heart as inorganic. The subsequent disappearance of the murmur proved I was correct. In corroboration of this opinion, I may quote a passage from the classical work of my colleague, Dr. Stokes, bearing on this subject:—"But we must be cautious in rejecting the opinion, that inorganic murmurs may not be seated in the mitral orifice. As a general rule, we may adopt the statements of Drs. Hope and Walshe; but I cannot help believing that I have observed cases of inorganic murmurs, which, so far as physical signs went, were closely similar to those of ordinary mitral disease, with regurgitation into the auricle." The visible pulsation of the arteries was so strongly marked in this case, as at first to give the impression that there was regurgitant disease of the aortic valves; but the absence of murmur with the second sound, which, on the contrary, was short, sharp, and local, not extending up the sternum, satisfied me that there was no disease of that orifice. I therefore came to the conclusion that it was a case of anæmia, caused by the diarrhœa which he had been so long subject to, and the tonic and ferruginous treatment directed to counteract that tendency proved successful. There is an apparent anomaly connected with this disease that the practitioner should be aware of, namely, that some persons suffering under anæmia present a ruddy, florid appearance, and, from the symptoms of oppression about the heart, vertigo, and sensation of weight in the head, may be considered as suffering from plethora; now if blood be drawn from a vein, its appearance may also tend to strengthen the opinion, owing to its being cupped, and as highly buffed as in a case of acute pleurisy or rheumatism. The presence of this buffy coat on the blood, independent of any inflammation, has been supposed by Andral to depend on the constitution of the elements of the blood, for as there is diminution of the globules in anæmia, while the fibrin remains in the normal proportions, there is, therefore, an excess of fibrin in the blood; now, Andral states, that whenever there is an excess of fibrin, and that the coagulation of the blood does not take place too rapidly, this principle accumulates on the surface of the coagulum, and so forms the buffy coat, which is thus characteristic of disproportion in the relative constituents of the blood.

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## RICHMOND HOSPITAL.

### *A few Clinical Remarks on the Use of the Starched Bandage in some complicated Cases of Fracture.*

BY JOHN HAMILTON,

SURGEON TO THE HOSPITAL.

Some years since, when the starched bandage was first introduced in the treatment of fractures in Belgium and France, it was tried by many surgeons in this country, but quickly abandoned; and considering the way it was generally applied, this cannot be wondered at. A calico bandage, dipped in starch, was wound round the limb, and expected when dry to form a splint, exactly moulded to the part, and so it did. But in drying, it also contracted, and exercised considerable compression on the soft parts, particularly injurious when those were situated over bony prominences, as the lower end of the ulna, or indeed the whole length of the superficial side of that bone, the malleoli, &c. The starched bandages also frequently dried in hard sharp ridges, forming indurated ring-like constrictions. From both these causes, particularly in children, mortification, more or less extensive, resulted. A child was brought to me at the South-Eastern Dispensary, in whom a starched bandage applied for fracture of both bones of the fore-arm, and left on for many days, had caused gangrene of a third of the fore-arm, happily extending no deeper than the sub-cutaneous cellular tissue. In other instances the mischief was much more serious, and several cases were published at the time, exposing these injurious effects. Though such severe consequences were not always induced, the patients suffered such pain from the pressure of the hard ridgy bandage next the skin, that it became intolerable, and had to be taken off. In removing it, another disagreeable consequence was found, in the adhesion of the bandage to the skin and hairs, so that the latter were obliged to be torn out, or painfully pulled, and bits of the cuticle were often removed. Applied in this way, and left on, no use could be made of it in compound fracture, as how could the discharge get out? nor in any fracture where the contusion or direct violence led to the expectation of much swelling. The starched bandage, consequently, fell into disuse. M. Seutin, of Brussels, visited Dublin, and exhibited at Steevens' Hospital his mode of application, which obviated all these objections, and ought, I think, to have led to a more frequent use of the starched bandage in the treatment of fractures. Like every inventor, M. Seutin applied it much more extensively than is likely to be done by any one else. He puts it on, for instance, in the very first instance, a proceeding the benefit of which appears to be very doubtful. I believe it is much better to let the first fortnight elapse, and the first accidents of swelling, vesication, &c., to subside, before putting the limb in the starched bandage; this is the plan I have followed in this hospital in a large number of cases, and in a more limited number of private patients, greatly to their comfort, as about the third week, the patients with broken legs, instead of being still confined to bed, can go about on crutches in the open air, a matter of great moment in delicate people, or those who cannot conveniently stay away from their business. But what I am anxious very briefly here to enforce is, the great value of the starched bandage in cases of broken leg, where, from any cause, the leg cannot be kept steady and motionless by the aid of the usual splints.

Some years ago, I saw, with Mr. Newland, of Camden-street, a gentleman who, while tipsy, had slipped off the pavement, and suffered Potts' fracture and dislocation of the left ankle. The foot was reduced, the displaced fracture put in proper apposition, and kept so by side splints. The next morning everything was right, and the limb as I had left it. The third day I found all in confusion. In the night delirium tremens had manifested itself, by the patient getting out of bed, dragging the broken limb after him, without apparently feeling any pain, and searching about the room for a gun to shoot his aunt, whom he believed to be a Young Irelander! With great difficulty he was got to bed, and kept there, but he was constantly tossing about the broken limb, to the total derangement of the apparatus, and re-displacement of the fracture. It was quite clear, that even if the foot and leg could be kept tightly fixed, the incessant and violent motions of the body would twist and turn the upper fragment, and irreparable mischief take place. The only thing likely to answer was, to put the limb up in such a way that movement would not act injuriously on the fracture. The starched bandage seemed best likely to fulfil this indication, and accordingly, during a lull, after the exhibition of opium, I applied it, rather thicker and stronger than usual, and guarded by small wooden leg-splints. It answered perfectly, though for the next twenty-four or thirty hours the patient was delirious and most restless, and with difficulty kept in bed; the whole leg in the starched bandage moved about with perfect safety to the fracture. The delirium was subdued by the usual remedies, and the starched bandage kept on during the further progress of the case, which was quite satisfactory. Let me relate a more difficult case still of compound fracture of the leg:—

Pat. Shalvey, ætat. 56, admitted July 11th into No. 1 Ward, with compound fracture of the right leg. He had been wheeling a barrow of stones in Glasnevin Cemetery, along a plank ten feet above the bottom of a vault; he was pulled down by the wheel of the barrow slipping off the plank, and besides the injury by the height of the fall, he was much hurt by the stones falling about him. On admission there were found to be fractures of both bones of the leg above the ankle, the foot slightly everted. There was a small punctured wound through which the sharp end of the broken tibia had protruded, but no bone was now visible. From the opening came a considerable flow of blood, and there was much swelling from effusion of blood through the leg. Spasms occurred every now and then, his manner excited, but his pulse only 50.

His wife said that twenty-two years ago he had suffered concussion of the brain, and had remained insensible for twelve hours, and was so ill afterwards as to be confined to his bed for a month. For some time his memory was confused, and he used wrong words, and ever since has been subject to loss of memory.

He was placed on his side, and the leg put on a padded splint, the thigh and knee flexed, and a cold spirit lotion applied. He was so restless that the resident pupil gave him an anodyne, but it did not quiet him, and about three o'clock, as he complained of pain in the hypogastrium, and could not pass urine, the catheter was passed, and twelve ounces of water withdrawn, after which he went to sleep. On the following morning, the 12th, he was lying in a stupor, he could be roused to answer a few questions, but soon dozed off again; no stertor, but the breathing heavy. Pulse 86; pupils natural. He continued during the day in a state approaching to coma, it being impossible to get him to speak, except yes or no, and this with difficulty; he was covered with profuse perspiration. There was much effusion into the knee joint, and constant tremors and startings of the fractured limb, which he kept tossing about. The other limb had also strong muscular spasms in it. He was put on his back, and the leg in lateral tin splints, but he tossed them all about, and in the evening the tibia was bent at a considerable angle at the seat of the fracture; he was incessantly moving about and picking at the abdomen. Pulse 128; muscular tremors of the limbs almost continuous.

13th. Still in a state of stupor, tossing the limb about in the most careless manner, without evincing the least pain. His wife said he had several spasmodic shiverings of the entire body yesterday, and three times during the night, each lasting a few minutes. He was bled to eight ounces, when the pulse began to fail. The limb was placed on an inclined plane, with stout lateral splints, but this failed to prevent him jerking it about. In the evening and during the night he had several more of the rigors, which absolutely shook the bed. Some leeches were applied to the temples and cold lotion to the head, and he was ordered calomel and James's powder, a grain of each every hour.

14th. Insensibility continues; he moans and tosses himself about very much; his wife says he spoke to her this morning, and passed water himself, but was unable to call attention to it, though he evidently wished to do so. The tongue could be seen dark and dry. He was cupped from the temple to ℥vi., but the pulse fell and became fluttering.

15th. Mouth slightly affected by the mercury, and he had some purging, and the next day he was more rational; a blister was applied to the head, but the mercury was omitted.

He was constantly endeavouring to move his leg, which besides was agitated by frightful spasms, *during which the broken ends of the bone could be heard grating against each other.*

20th. His mind better, but still confused; the spasms of the limb nearly as bad as ever, kept up, no doubt, by his extreme restlessness. Suppuration has taken place round the broken ends of the bone, which can be felt quite bare with the probe introduced through the wound; around this the integuments are dull red, œdematous, and obscurely fluctuating, and matter in small quantity can be expressed from the opening. He has troublesome diarrhœa, and to add another difficulty, the right buttock is beginning to strip over a surface the size of one's hand. He could not, therefore, be kept any longer on his back, which was the only position in which any restraint could be secured against the motions of the broken limb.

It appeared to me that his only chance was to put up the leg in the starched bandage; with this alone he could move about or lie in any position without disturbing the fracture. I accordingly applied the starched bandage as high as two-thirds up the thigh, making an opening opposite the wound on the leg to let the purulent discharge escape. On the fourth day after the starched bandage was put on, he had improved amazingly. The mind clear, his nights good, and the spasms gone; the pulse fell from 108 to 96. From this time he never had a bad symptom, the wound quickly healed, and when the bandage was removed on the 4th of September, firm union appeared to have taken place. It was, however, re-applied and kept on till the 17th, when he was dismissed well, nine weeks after admission.

If we consider the difficulties in this remarkable case, the deranged state of mind destroying the perception of pain on motion of the fracture, which was therefore not guarded against, the fearful spasms absolutely grinding the broken ends against each other, the frequently-recurring nervous tremors, the diarrhœa, and finally, the stripping of the back, the great value of the starched bandage must become strikingly apparent.

One word as to the way of applying it. An ordinary calico bandage should first be evenly applied from the toes to the knee, when the fracture is not above the middle of the leg, and above the knee when it is. The outside of this should be smoothly smeared with thick, clear starch, and a starched bandage rolled over this. Then pieces of pasteboard, soft and rather thick, and previously steeped in warm water, so that they readily mould themselves to the inequalities of the limb, should be put on each side of the leg and along the side of the ankle and foot, and also before and behind the seat of fracture. The pieces of pasteboard that go down the side of the leg and foot, when they have dried, make a kind of firm splint; they need not be broad, and should not be cut into the proper shape but torn, so that the edges are not hard and sharp, but gradually bevilled off. The whole should now be well and evenly smeared with starch, and then an unstarched bandage applied over all. It will be seen, therefore, that an unstarched surface is next the skin of the leg, obviating the objections I have mentioned, and that the outside of the apparatus is unstarched, preventing its troublesomely sticking to the surrounding sheets, and also to the ordinary leg splints which it is advisable to put on for a support, till the starched bandage becomes hard and firm. Forty-eight hours usually elapse before it dries completely. It should be slit up either with Seutin's scissors, made for the purpose, or what does as well, a wooden spatula or paper knife inserted under the edge of the bandage, which can thus be cut down with a pen knife, bit by bit, the whole length. When all is seen to be right, the bandage can be closed again and kept so by the application of a little more starch and a few turns of a roller. The patient can now be allowed not only to move or lie on the bed as he likes, but may get up and go about on crutches, not leaning, of course, any weight on the broken limb.

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## On the Recognition of Vegetable Poisons by the Aid of the Microscope.

BY WILLIAM FRAZER,

LICENTIATE OF THE KING AND QUEEN'S COLLEGE OF PHYSICIANS AND R.C.S.I., ONE OF THE LECTURERS IN THE CARMICHAEL SCHOOL OF MEDICINE.

Considerable practical difficulties exist in the medical investigation of fatal instances of poisoning, and the detection of the deleterious substance which has been employed, even when it chances to be one of our well-known ordinary chemical agents which are most easily recognized, is a problem that requires considerable skill in the details of analytic chemistry, and often slow and tiresome operative manipulation; still, thanks to the present state of chemical knowledge, it is a question which may be solved by any one who exercises adequate care and enjoys an average extent of practical dexterity, and at the same time, with so much certainty, that its accomplishment removes the possibility of error, leaving not the shadow of a doubt on the mind as to the exact nature of the poison itself.

It is, however, a very different matter when vegetable poisons have been the source of mischief; owing their activity to varied proximate principles, many of which are as yet obscurely known and difficult to recognize, even when isolated, by the aid of chemical agents, they are almost completely beyond the reach of our recognition if absorbed into the system, and we are, under such circumstances, usually obliged to rest satisfied with whatever accidental information can be obtained from circumstantial evidence, or to confess that whilst negative results demonstrate the absence of chemical substances, our positive information extends no farther than of stating that some vegetable possessing dangerous properties has been the cause of death.

Now we meet, although not very frequently, with instances of the latter form of poisoning, in which, usually as the result of accident, some of our ordinary indigenous plants have caused deleterious, and, perhaps, fatal effects; such, for instance, as the œnanthe crocata (which seems pre-eminently to deserve the rank of the most dangerous of our native flora), or the other poisonous umbelliferæ; or of the solanaceæ, as belladonna, which appears to cause more frequent accidents in England than with us, probably from its greater abundance; or the ranunculaceæ, as aconite, &c.; and in all these, and similar poisons, our test tubes and reagents appear to be as yet almost powerless in detecting their presence. In such cases I would propose, that, aided by the history and symptoms, an aid of which we always avail ourselves in other forms of poisoning, the microscope be employed in their investigation; and the most certain way, I believe, to accomplish this result, especially for those not very intimately acquainted with the peculiar differential characters of the plants, is to compare whatever vegetable fragments may be ejected by vomiting during life, or found in the body after death, with some recent specimens of those vegetables which are most suspected to have been the cause of the accident. I have satisfied myself in this manner that the *leaves*, especially of aconite, henbane, foxglove, belladonna, and several other of our indigenous poisonous plants, can be easily recognized, and that they present distinctive characters adequate to establish ample ground for their discrimination.

The point in such an investigation, which we require to determine in the first instance, is identically similar to the first step in deciding on the nature of a botanical specimen; if the specimen consists altogether of cellular tissue, it is to be classed as one of the "cellulares," and possibly may prove to be some of the poisonous fungi; should it, however, yield us distinct evidence of vascular tissue, thus demonstrating its more exalted place in the botanist's systematic arrangements, in that case we will have as our next duty, supposing it is a fragment of leaf which we are examining, to decide on the nature of the venation, which at once points out whether it constituted a portion of an exogenous or of an endogenous plant, the latter having the well-known parallel venation, and the former presenting an equalled distinctive reticulated arrangement. Having advanced so far, we then have four other points, at least, for aiding our further identification of its source.

1st. The presence or absence of hairs, their relative abundance on the upper or under surface of the leaf, and their shape, composition, and arrangement.

2nd. The appearance of the epiderm on the upper surface of the leaf, the form of the cells of which it is composed, the existence or non-existence of stomata, and if they are present, their shape, size, and disposition in the epiderm.

3rd. Similar observations on the epiderm upon the under surface of the leaf.

4th. The disposition of the parenchyma of the leaf, the development of various crystalline matters (raphides) in this tissue, and their form when they exist.

An agreement in these four points, with corresponding appearances in a recent specimen, would, I conceive, afford more than an equivalent to the degree of moral certainty which is now derived from a chemical analysis of a mineral poison, and I can readily understand, with the scientific aids now at our disposal, that just as the chemist is able to place securely in a sealed tube, and exhibit before the court sublimates of arsenic or mercury as undoubted evidences of his analytic skill, so the microscopic observer might produce, to corroborate his testimony, accurate drawings of the fragments of a poisonous plant, printed by solar light, as photographs, or more slowly obtained with the aid of a pencil and camera. I have myself made, during my investigations on this subject, a number of rough sketches in the latter manner, of the appearances presented by several of our ordinary vegetable poisons, but they are so easily identified by the method I have attempted to describe that I need not dwell further upon them.

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## On the Treatment of Cholera in the Stage of Collapse, by the Artificial Production of Peritoneal or Cellular Dropsy.

BY BENJAMIN W. RICHARDSON, M. D.

We extract a few of the remarks upon this subject, contained in the *Association Journal.*

"The more I have considered the matter, the more thoroughly have I been confirmed in favour of the now generally received opinions, that the symptoms of collapse are due to the loss of fluid which the body has sustained; that the poison of cholera, like a dose of a violent purgative, has a limit to its action on the body; and that if a patient can sustain the loss caused by the dose of the poison he has received, or if he can be sustained artificially from that loss, his recovery is to a great degree secured.

"A rapid removal of fluid must not always be considered in regard to quantity, because all physiological learning goes to prove that a certain balance between the densities of arterial and of venous blood must be kept up, to secure for the system many processes upon which its existence directly depends.

"Now, in cholera, as the serous loss must be derived mainly from the arterial circuit, it is obvious that a very few copious discharges from the stomach or intestines lead quickly to the destruction of the balance that ought to exist, speedily arrest the course of the circulation, and of necessity interfere with the respiratory process, the generation of animal heat, the function of the nervous system, so far as they depend on the blood, and with every other process which we consider essentially vital. . . . . . Now, in observing a patient in the collapsed state of cholera, . . . . . one sees at once why so much of incessant failure attends many of those remedial measures which are commonly adopted.

"Thus we see that the application of external warmth over and above the natural animal temperature, and for the purpose of increasing the heat of the patient, is a proceeding at once useless and unphilosophical; since the body does not absorb caloric from without, but makes it from within, and diffuses it externally. And, as the coldness of cholera arises solely from the fact that the internal chemical process, by which heat is produced, is arrested, it is obvious that the only means by which a new supply of heat can be obtained, will be by endeavouring to rekindle the natural calorifying influence. It is of course strictly physiological to surround the body of a cholera patient with a temperature somewhat above the ordinary point of animal heat, or by a non-conducting material; for this is a conservative step, tending to retain such small amount of caloric as may be generated within; but to do more—to heat the atmosphere of the room, to shut off currents of fresh air, without which respiration is a nullity—is a system directly opposed to our knowledge of first physiological laws.

"Again, no one who has observed cholera much, can fail to be convinced of the frequent inutility of drenching a patient with large amounts of simple liquids or medicines, during such times as copious vomiting and purging are going on. For there can be little or no absorption by a membrane, at a time when it is pouring out excreted matters from every point of its surface: nor can we suppose that, even in the last stages of the disease, when from sheer want of fluid to exude, the watery evacuations have ceased, the membrane from which they have all proceeded, and of whose epithelium immense portions have been washed away, is in a very happy condition for the imbibition of substances, medicinal or otherwise. And, indeed, we find in practice that even the most powerful styptic remedies prove of little avail in arresting the discharge, unless given in that early stage of the disease, when their retention is secured.

"As, then, the loss of fluid from the system is the cause of the collapse, as in many cases it cannot be replaced by the natural process of imbibition from the intestinal surface, and as the blood cannot circulate and reaction occur, without such replacement, there is open before us these plain and simple physiological problems—Are there any other means by which fluid can be introduced into the exhausted circulation? and, if so, which of these is the safest, and most calculated to effect the object desired?

"We have seen that the mucous membrane of the alimentary canal, while carrying on an extensive excretory process, cannot invariably be made a medium for absorbing fluid to any great extent. Some practitioners have, however, believed that the administration of large quantities of fluid by the mouth, during the intervals of rest from vomiting, has been attended with benefit; and there surely can be no objection to a plan so reasonable, unless the swallowing process should itself excite vomiting, and especially as patients themselves almost invariably crave urgently for drink.

"The most important step that has as yet been made on the human subject towards supplying the exhausted system with fluids, in cholera, is that of throwing a considerable quantity of fluid directly into the circulation through the veins: and it cannot be denied that, in practice, this plan has been attended with some amount of success. That it should not be generally successful is, I think, strictly explainable on physiological grounds. In the first place, the plan is objectionable on the mechanical argument, that to throw a large amount of fluid through a vein directly into a heart itself exhausted, is sufficient to paralyse that organ to a serious degree; for I have found, by direct experiment, that a weakened heart often succumbs instantly from over-distending it with blood itself.

"Another objection to the direct transfusion of water, or of water impregnated with saline or other materials, into the circulation, is, that such fluid is not the proper stimulus for exciting the heart to contraction; and that, even if the heart does contract upon it, and throws it round the pulmonic circuit, it is, again, not a substance upon which the process of respiration can properly act. When a saline substance, injected into a vein, accomplishes anything, it does so, I imagine, by dissolving the half-clotted blood in the cardiac cavities, and by carrying the blood, thus diluted, round the lungs.

"But the last and main obstacle to the success attending injection into a vein is, that by this process no such competent amount of fluid can be introduced so as to produce a permanent effect: and, in truth, we too often find in practice that, after such injection, the patient only rallies for a brief period, to sink again under a continuance of the discharge from the intestines. I do not know what is the largest amount of fluid that has ever been injected into the vein of a cholera patient; nor yet the largest amount of fluid that has been known to be lost during the disease.

"Speaking from general observation, however, I may say that the largest amount of fluid I have ever heard of as having been injected into a vein in the course of a case, is from seven to ten pounds, and the most I have ever seen injected is from three to four pounds; while I have known a cholera patient to pass off by one vomit from two to three pounds, and repeat this many times in the course of three or four hours.

"In contemplating the subject of transfusing watery matter into the system after the modes I have described, the question occurred to me, whether we ought to confine ourselves to these modes; or whether any other means existed of introducing fluid matters into animal bodies in very large quantities, and in a manner which should secure their absorption. This thought led me to look back upon the pathological characters and treatment of those diseases in which serum is largely thrown out into serous cavities or cellular tissue. I recollected that, in cases of this class (dropsical cases), not only were several gallons of fluid often thrown out of the circulation into the system without immediate danger, but that patients thus situated could tolerate a degree of purgation which would absolutely destroy healthy individuals.

"The idea furnished an important suggestion; and I consequently commenced a series of experiments on animals, which, as they are as yet in an imperfect state, I shall only describe in general terms, reserving the particulars for my next report.

"The experiments up to this time have mainly consisted in exhausting dogs and cats by starvation and violent purgation with large doses of elaterium, and afterwards injecting either their peritoneal cavities or their cellular tissue with large quantities of distilled water, at the blood temperature. The results, in general terms, are as follows.

"I find that either into the peritoneal cavity, or into the cellular tissue, a quantity of water, varying from a tenth to a fifth part of the weight of the animal may be injected with little risk. The effect of this is to induce a sleepy condition, which lasts from twenty to thirty hours, long before which time all trace of the injection is lost. If more than this is thrown in, the sleep or rather torpor (for the animal only remains quiet, and rouses when spoken to), ends in death.

"Setting aside casualties, I infer from my experiments as they now stand, that into the peritoneum or the cellular tissue of a patient in a proper state of collapse from cholera, water to the extent of at least a tenth, or even a fifth, part of the whole weight of the body might be injected with safety; and that the absorption would be almost immediate.

"The performance of the operation for producing this artificial dropsy is exceedingly simple. The instruments required are simply a scalpel, lancet, or trocar, a common catheter, and an ordinary enema syringe. If the cellular tissue is to be injected, a deep puncture is made with a lancet in some fleshy part, the abdomen is the best, and the blunt point of the catheter is then introduced, and wedged sufficiently far into the cellular substance to allow the skin around it to be firmly grasped, so as to keep it steady in its place. The other end of the catheter being connected with the enema pump, an assistant very gradually throws in the fluid, and, as the tissue distends, gentle compression may be made with the hand so as to force on the fluid under the skin.

"As yet I have had no favourable opportunity of trying the suggestion I have here thrown out in cholera; but that it might be put into application in desperate cases, and might prove advantageous, I have no doubts whatever. The advantages of it would be:—

"First. That an abundant store of fluid would be supplied, which the exhausted circulating system would rapidly and effectually take up.

"Second. That as this imbibition would take place through the capillary system, the fluid would enter the veins freely charged with the solid constituents of the blood, and would pass to the lungs in a condition suitable for respiration.

"Third. That the process would in no way interfere with the administration by the mouth of astringent solutions, or such other medicines or liquids as the practitioner might consider indicated.

"But, although I am thus sanguine on this subject, I wish it to be understood that the first trial of this process should commence in a case where the patient is in the last stage of collapse, where other remedies have failed, and where death is imminent.

"I should scarcely omit to refer, in conclusion, to the fact (though it is one pretty generally understood), that impostors, in feigning diseases, have been known to inflate their own cellular tissue or that of their children with air, without any harm following; and the authors of the article, 'Feigned Diseases,' in the *Cyclopædia of Medicine*, make special reference to the statement, that some French conscripts were known to inject water into their own peritoneal cavities to produce a factitious ascites; while numerous instances have lately been recorded, in which, after the operation of tapping, such irritating substances as iodine and brandy have been thrown into the peritoneum without leading to fatal results."

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We subjoin some observations

## On the Employment of Injections of Milk, or Milk and Water, into the Peritoneal Cavity, Cellular Tissue, or Venous System, in the Collapse of Cholera.

By WILLIAM BIRD HERAPATH, M.D.

In a paper read to the East Surrey Cholera Society, and published in the last Number of the *Association Journal*, by Dr. Richardson, a proposal is made to inject the peritoneum and cellular tissue of cholera patients in the stage of collapse with large quantities of water, for the purpose of rapidly supplying the loss of serum experienced by the excessive discharges from the intestinal mucous membrane. This extremely philosophical and ingenious suggestion is certainly highly deserving of a mature consideration, and a careful digest of properly conducted experiments. But it has occurred to me, whilst reading these remarks, that the injection of a fluid more closely approaching the character of serum in its chemical constitution, would be more likely to give permanent benefit, and avoid the chances of destruction of the blood-corpuscles, occasioned by the difference existing between the specific gravity of their contents and of the rapidly imbibed water.

The most readily obtained liquid, having all the qualities we can desire, is most assuredly cow's milk; it is always at hand in any quantity, whilst its tendency to coagulate may be obviated by adding a little solution of carbonate of soda or potassa; perhaps about one scruple of the salt to a pint of milk would be sufficient.

The only difficulties about the matter would be the adulterations to which it may be subjected by fraudulent dealers, and the accidental presence of foreign bodies.

The entrance of foreign bodies into the circulation, or into the cavity of the peritoneum, or the meshes of the cellular tissue, may be easily prevented by attaching a fine muslin or gauze filter, or sieve, to the mouth of the injecting syringe. It remains to be proved whether this fluid would be absorbed by the peritoneal vessels as readily as water, or with sufficient facility to be of service.

The specific gravity of good pure milk varies from 1.041 to 1.033 or 1.020; serum varies from 1.026 to 1.037, and even 1.050, according to the presence of health or disease. Now to produce the difference in specific gravity required by the laws of endosmosis to act in a state of health, water may be added to the milk. But the *viscidity of cholera blood* would assuredly indicate an increase in the specific gravity, and no dilution would be ***necessary*** in this disease; but if it were adulterated with water only, it would be a matter of no great importance.

It seems highly probable that milk, or milk and water, would be a much more successful fluid for this purpose than water only, and would certainly offer many great advantages, especially if the injection were to be made directly into the venous system, as the corpuscles of the blood do not suffer any material alteration in form, when examined microscopically, after dilution with milk; they suffer nothing from the admixture, especially if the milk is obtained from an animal of the same kind as the blood experimented on, and if the milk used be pure and unmixed with water.

I apprehend also that the introduction of an albuminous constituent is essentially necessary, to supply the waste of this vital pabulum experienced during the exhaustive discharges of this disease.

It is quite a question whether the subsequent symptoms and fever, exhibited during the recovery from collapse, do not depend as much upon the loss of the albumen and salts of the serum, as upon the great difference subsequently existing in the relation between the quantity of the *solids and watery fluid* of the blood.

The chemical constitution of milk does not differ very materially from that of the chyle obtained by healthy digestion, which would of course be the only means *nature* would employ to regenerate slowly the lost liquor sanguinis.

*Art* physiologically directed comes to the aid of nature, and by employing her own Divine laws, assists her early efforts and wonderfully aids the cure—*gains time*, an element of vital importance in this marvellously rapid and fatal disease.

Nature would then merely have to regenerate the lost epithelial cells, which would of course be a work of time; and no efforts of art could remedy this defect; if the amount of the epithelial exfoliation had been very excessive, the exhaustive discharges of the choleraic diarrhœa would go on in spite of all our injections; for the intestinal mucous membrane would then be in the condition of the dermis denuded of its epidermis by artificial vesication; exosmosis must occur by serous transudation until the protective covering had been reformed, when endosmosis would again recommence from the reestablishment of the physiological action of these wonderful cells.—*Association Medical Journal.*

[In recording the above communication, we would merely allude to the effects which have followed the use of milk in the only instance, we believe, in which it has been injected into the human body—for hydrocele; in this case the milk coagulated, gave rise to serious ill conquences, and had to be removed by free incision, in the form of curds, mixed with a great quantity of pus. Sir Astley Cooper, who records this circumstance in his "Lectures," merely adds—"Be upon your guard, therefore, against making experiments of this kind."—Ed.]

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## Remarks on the Syphilitic Practice of the Parisian Hospitals.

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*Hôpital du Midi.*—With reference to the special nature of the syphilitic virus, M. Ricord holds very decided opinions, viewing the poison as distinct and specific in its source, nature, and consequences. It is hardly possible to believe that, at the present day, there should be some authorities of high repute confirmed in the opinion that syphilis is a specific disease, and that its virus manifests a specificity of action, and who would, at the same time, think that the uncertainties of contagion, the mysteries of inoculation, and the plurality of accidents consequent upon sexual intercourse, should perfectly justify them in denying to a special ulceration, as chancre, a special source, at all times and in every circumstance; in other words, they are willing to ascribe to purulent matter, of a kind not essentially syphilitic, effects analogous to those dependant upon virulent infection. Inoculation, however, is perfectly conclusive upon this point, and demonstrates the fact that the pus or muco-pus, furnished from any diseased surface other than a chancre, is ineffectual. As far as experiment and vigorous observation show, it is chancre, and chancre alone, as a primitive ulcer, which can reproduce chancre, and determine syphilitic disease. This would appear too exclusive, since it rejects the belief so generally entertained, of the transmissibility of syphilis, through the infecting medium of secondary accidents, as mucous papulæ, tuberculæ, &c. It is well known that chancre, during the period of reparation, frequently assumes the aspect and characters of mucous papulæ; and in no small number of instances, it is extremely difficult to make a differential diagnosis. It often thus becomes an important point to decide between primary sores and secondary accidents, particularly when touching the contagion of the latter. The evidence given in regard to the transmissibility of secondary diseases from nurse to the nursed, and *vice versa*, is very imperfect and wanting in essential proof. For this reason, among other facts, tending strongly to the contrary conviction, Hunter denied to secondary accidents the power of communication, and M. Ricord partakes in this opinion.

The primitive ulcers or chancres are of different kinds. There are four well-marked species:—the simple, the inflammatory, with tendency to acute gangrene, phagedenic, and the indurated. Let us here follow out a lecture given at the bedside, illustrating different points of doctrine regarding chancre, especially the indurated variety and its consequences. It is comparatively a small number of chancres that indurate, and it might be asked, What is the cause or necessary condition of induration? It is found in certain persons that a first chancre, for example, will not indurate; the second does, and those subsequent do not. It is conceived that, as small-pox, once taken, gives immunity from subsequent attacks, and as vaccination preserves against a second inoculation, at least for a certain period, when the system seems to be under its modifying influence, so in syphilis, as a general rule, a person who has once had an indurated chancre will not have another. There are probably exceptions; i. e., a second indurated chancre may occur, which would intimate the destruction of the syphilitic diathesis, acquired with the first!

At what period does this variety of primitive ulcer commence? The solution of this question is important; for the moment induration takes place, the disease is no more local, the syphilitic disposition is established, in virtue of which the subsequent manifestations present themselves. In most cases this is difficult; for it is often next to impossible to trace out the time and circumstances of the contagion, and being essentially *indolent*, it frequently passes for a long time unperceived, and previous to the patients presenting themselves. M. R. is able, however, to gather that induration never occurs before the third day. It is always manifested during the course of the first and second week. It appears even certain that if a chancre exists more than three weeks, without induration, it will not indurate! It is sometimes masked by common inflammation, which may lead to a wrong diagnosis, or it may become phagedenic, when one would be apt to attribute the constitutional symptoms to the non-indurated phagedenic chancre. Specific induration is the certain, absolute proof that constitutional infection has taken place. As a consequence ganglionic engorgement supervenes. As a general rule, more than one gland is affected; the swellings are *multiple*, distinct, hard to the touch, very indolent, and terminate ultimately in slow revolutions. Suppuration is rare, and can be traced to some foreign cause. Indurated chancre being determined in conjunction with multiple bubo, M. R. lays down the following law, which can only be evaded by specific treatment, that six months will not pass without the manifestations of syphilitic diathesis. Even previous to this period there are indications of constitutional disorder, as chloro-lenamia, feebleness, alopecia, neuralgic pains of the head, intromittent nocturnal pains of the extremities, intensified by heat. The lymphatic glands, especially in the posterior cervical and cephalic regions, become engorged, and form what M. R. calls *secondary buboes*. They are indolent, multiple, seldom or never suppurate. The first cutaneous manifestations are exanthems, to which succeed papulæ, squamæ, &c. The same affections invade the mucous membrane, but their progress is somewhat more rapid. After the first six months, rarely before, accidents, called tertiary, of a much more serious nature, follow. Such are affections of the subcutaneous, submucous, fibrous, and osseous tissues, and of certain organs, as the testicles, lungs, liver, &c. M. R. is inclined to think that after the tertiary symptoms the specific influence of the morbid diathesis on the body gradually diminishes, and ultimately becomes one of the most powerful causes of scrofula.

Mention is here made of the indurated chancre alone, and of its fatal effects upon the constitution. What testimony is there in reference to the non-indurated chancre and its varieties? That they are essentially local affections, never producing constitutional symptoms, unless under the supervention of indurated chancre, and only giving rise to lymphangitis and buboes, which are of two distinct varieties. 1. The lymphathetic or simple inflammatory, which is generally confined to one ganglion, yields readily to antiphlogistics, and rarely suppurates, and when it does, it does not yield inoculable pus. 2. The bubo *d'absorption*, which is common, generally confined to one gland, which is always superficial, and always tends to suppuration, the pus yielded being inoculable, and, therefore, contagious. These buboes *d'absorption* are nothing less than ganglionic chancres.

It is in the firm conviction that chancre is always, at the commencement, a local affection, and that sooner or later it will determine, though not fatally, to accidents either of a simple inflammatory kind, or of a specific nature, that M. R. so strongly advocates the ectrotic or abortive method of treatment, the objects in view being —1. To destroy the nucleus of contagion. 2. To prevent the production of buboes. 3. To cut short the progress of the ulcer, and to counteract constitutional infection. In order to success, cauterization is necessary at an early period, and must be repeated, if a healthy surface does not succeed the first. Even if too late to work ectrotically, it may be otherwise beneficial, in modifying the ulcer, abridging its duration, and furthering the period of reparation. It being necessary to destroy the infected tissue extending a little beyond the confines of the ulcer, nitrate of silver is generally considered too superficial in its action. M. R. recommends Vienna paste as the caustic most successful in his hands, also the strong nitric acid (so much extolled in England, but very painful), and sometimes the actual cautery. Should the abortive treatment fail, and there be evidence of constitutional infection, mercury is employed internally. It is much more powerful against secondary than tertiary accidents. In some cases it prevents their manifestations, in others it retards them for a considerable time. It must be used rationally, and rejected when injurious or contra-indicated. It is to the tertiary symptoms that M. R. reserves more especially the iodide of potassium, when its action is considered all-powerful. The mixed treatment by mercury and iodide of potassium is frequently employed against tardy secondary accidents, or when complicated with tertiary symptoms.

*Hôpital Lourcine.*—It is difficult to obtain from the regular authorities more than two tickets of admission to this hospital, which is exclusively reserved for female syphilitic patients, but through the kindness of M. Cullerier, the surgeon to the institution, I was enabled to attend his ward for some time, and make the few following notes. It is observed, that, when blennorhagic inflammation is liable to attack the different parts of the genital organs in the females, as the vulva, urethra, vagina, and uterus, either conjointly or separately, it is more commonly seated in the vagina. Vulvitis is not unfrequent; urethritis is comparatively rare, but it is believed more frequent than is generally supposed by surgeons. It may exist alone, but it is often consecutive to vaginitis, which is the most common. Catarrhal uterine blennorrhagia is also considered frequent, and often leads to ulcerations of the os and neck, which are tedious to heal. In the treatment of urethritis, copaiba and cubebs are generally had recourse to, and with good offeet. When observed at the commencement, it is sometimes cut short by cauterization, with the nitrate of silver in substance. When caustic is applied in vaginitis, as it frequently is, the stick is introduced as far as the os uteri, and is then retracted in a spiral manner, so as to touch every part of the vaginal walls. The isolation of the inflamed surfaces is much recommended. This is easily and effectually done, by the introduction of small "tampons," or meshes of charpie, or of thin folds of lint, which, when saturated, are removed and replaced. Injections of a strong solution of nitrate of silver will sometimes cut short uterine blennorrhagia at its commencement. Its powder is occasionally sprinkled on the uterine mucous membrane, by means of Lallemand's *porte caustique.* M. Cullerier had prepared small *pencils* of tannin, sulphate of copper and of zinc, similar to those of nitrate of silver; and at the time of my attendance, was employing them in cases of uterine catarrh. He introduced a pencil once every second or third day, and allowed it to remain till it gradually dissolved away. So far as his observations had extended, the results seemed satisfactory.—*Montreal Medical Chronicle.*

## SUMMARY.

*Belladonna in Salivation.*—A woman treated by mercury, internally and externally, for serous diarrhœa, was affected with profuse salivation. Dr. Erpenbeck treated this latter complaint with belladonna in divided doses, of two grains and a half, taken in emulsion every twenty-four hours. Next day the salivation had subsided, and the mouth was quite dry. On stopping the belladonna, the salivation returned, and again ceased when it was resumed. The author believes that after this fact and some similar ones belladonna is the best treatment for salivation.—*Hanover Corresp. Blatt.*

*Cold as an Anæsthetic Agent.*—Dr. Thomas Wood, of Cincinnati, states (*Western Lancet,* April, 1854), that he has used cold, as recommended by Dr. Arnott, of London, for preventing pain in surgical operations in various cases. In most of these it has met his expectations, but in others it has entirely failed, or but partially prevented suffering. His experience has led him to the following conclusions:—"The degree of cold required to destroy the sensibility of a part is but a little above that of the freezing point of water, and it must be obvious to all that this degree of temperature cannot be with impunity extended over a large surface of the body, or made to penetrate to a depth much below the surface in any of the vital regions; hence its use is naturally restricted to the minor and more superficial operations, and can never take the place of chloroform, or some of its kindred agents, in operations involving the deep tissues of the body. To operations upon the surface, such as removing small warts, tumours and nævi, or other excrescences from the skin, it seems peculiarly adapted; and for destroying the pain in the extraction of diseased or offending nails from the fingers or toes, it is far preferable to chloroform. First, it is to be preferred for the reason that in its use there is no danger of fatal injury to the constitution, as in chloroform, for its effects are purely local, and circumscribed; and, second, because the insensibility is more complete than is ordinarily obtained by chloroform, and is fully equal to the most overwhelming dose. I have repeatedly witnessed the most perfect composure of countenance in my patients, while a nail of the toe or finger was rudely torn, with a strong forceps, from its matrix, without the least exhibition of a sense of pain, or a consciousness of the progress of the operation, except from sight. It acts well on the skin, where a small portion is to be removed; but in plastic operations I would not use it, as the refrigeration necessary to remove the pain might so destroy the vitality of the flap, that direct union (upon which success in these operations wholly depends) would not take place. It has failed in my hands to be of any service in removing hæmorrhoidal tumours, although, according to some of the European surgeons, it has answered well for them in operations on the anus. In one case I attempted to remove a string of venereal vegetations from around the verge of the rectum, but was unable to get the part chilled to even lessen its sensibility, and I was finally obliged to use the chloroform before the operation was completed. The failure was doubtless owing to the rapid supply of heat to the part from the highly vascular organs in its vicinity, and the difficulty of conducting it away rapidly enough to reduce the temperature in the tumours to near the freezing point; and this difficulty, in all probability, will ever prevent its successful use in operations on the painful tumours of the anus and rectum. Cold has also failed to give much relief from the pain of opening paronychia. While it numbs the surface of the finger, it does not lessen the sensibility toward the bottom of the wound, even when the application is made a considerable time previous to the use of the bistoury. To chill a part that is to be subjected to an operation, for instance a finger or toe, it is only necessary to get some pounded ice or snow, and mix with it some common salt, and apply it, taking care not to extend it much beyond the region to be operated on. From three to four minutes will mostly suffice to remove all feeling from the attachments of a toe-nail. It is no matter how rapidly the temperature is reduced, but, after the operation, it is very essential that it should be raised cautiously and slowly up to the vital standard again. To effect this object safely a towel or large cloth should be saturated with cold ice-water, and allowed to remain on the part until reaction is fully established.—*Med. Times and Gazette.*

*Remarks on certain Local Remedies employed at the Central London Ophthalmic Hospital.* By Mr. Haynes Walton.—*Vinum Opii.*—It has been said that more than one surgeon in the metropolis has made a fortune with this, his panacea for ophthalmic disease; and the assiduity with which we remember to have seen it prescribed in our student career, is sure proof of its then general repute as a remedy. It would, however, seem that modern surgeons are distrustful of its vaunted virtues, and at the Central London Ophthalmic Hospital it is scarcely ever used.

The late Mr. Ware is generally supposed to have been the means of giving the drug the notoriety it acquired, but some assert that Mr. Wathen, his partner, was the author of its introduction.

Now the history of vinum opii as an ophthalmic medicine, possesses therapeutic interest; besides, it affords information, although rather of a negative than of a positive nature; but in matters of the kind before us, the one is as important as the other. To proceed, then, we learn from Mr. Lawrence's writings that the vinum opii is the tincture thebaica of the old London pharmacopœia, often called by the continental authors liquid laudanum of Sydenham, in which, however, half an ounce of saffron is added to the ingredients employed in making a pint. In the modern pharmacopœias the tinctura thebaica was omitted, and the present tinctura opii substituted for it. Mr. Ware, continues this author, ascribed a peculiar virtue to the combination of ingredients in the old preparation: he thought the spirituous tincture had not the same effect. He goes on to say: "I believe it was in consequence of Mr. Ware's recommendation, and the general use of the remedy in ophthalmia, that the College of Physicians again introduced vinum opii into their pharmacopœia: but it is singular that as the efficacy of the remedy was so pointedly ascribed to the precise combination of ingredients in the old formula, it should have seemed fit to that learned body to diminish the quantity of opium one-half. Mr. Ware informs us, in a subsequent edition of his treatise, that this new form is just as efficacious as the old, in which opinion I quite agree with him." "Without specifying cases, he (Mr. Ware) directs that the vinum opii should be dropped into the eye two or three times a-day; and he employs other treatment at the same time. I should never think of using it in acute ophthalmia; it would rather increase the inflammatory disturbance, though I must observe, at the same time, that it is not a very active remedy, and cannot do much mischief. Its employment should be restricted to cases of chronic inflammation." "I hardly remember, however, any case of a serious or obstinate kind, in which it has been decidedly effectual in arresting the disorder when employed alone."

It should be borne in mind that at the period to which Mr. Lawrence refers, the combination of many substances in eye lotions was considered essential, and that the admixture was supposed to be potent in proportion to the pain or burning that it produced. Among the great advances in medicine and surgery, we are taught that these violent measures injure the eye; and no one has endeavoured to impress this more than Mr. Lawrence.

We were not astonished to learn that Mr. Walton considers the vinum opii in an undiluted state much too irritating, and never uses it except with an equal proportion of water; but even so diluted he scarcely employs it, except to produce a sedative effect in cases of ocular pain and irritability. We confess that our faith in the medicine rests entirely on the opium it contains, and would suggest whether, when there seems indication for this drug, it would not be more rational to employ a watery solution of it. This accords with the views of a modern Irish surgeon of eminence, who employs the vinum opii without the spices.

It is well to mention that one of Mr. Walton's colleagues, Dr. Taylor, considers the belladonna lotion far preferable to the vinum opii, for those cases in which we have said Mr. Walton would use it.

*Belladonna* which may be called the special medicine of an ophthalmic hospital, one indeed that cannot be dispensed with, nor, in the present state of our knowledge, displaced by anything of equal power, is too well known to admit of remarks on its peculiar effect on the eye, or the cases to which it is applicable in general; but there is scope enough for a hint or two on the preparations of it that we possess, and the choice that should be exercised.

The watery extract, which is so commonly applied around the eyelids in a zone, is never used by Mr. Walton, who says that such practice is attended with inconvenience and discomfort to the patient, and is besides not so effectual nor so speedy in its action as a solution of it applied to the conjunctiva. He adds, that he is not aware of any state of the eye attendant on injury or arising from disease, in which belladonna in solution, or its active principle, atropine, may not be so used; moreover, that an effect so obtained is greater in degree, and, he believes, more lasting. The hospital formula is twenty grains of the extract to an ounce of distilled water, with half a drachm of rectified spirit to prevent the mixture from spoiling quickly. The whole is strained.

*Atropine.*—While we give all credit to this elegant chemical production, we must warn the student to be careful in its use, and to be cautious how he prescribes it. When such powerful preparations are resorted to, not only must the absorbing power of the conjunctiva be remembered, but the fact that a lotion applied to the eye may find its way to the throat through the lachrymal canals, be also borne in mind. Irrespective, then, of the great expense of atropine—a subject of importance to charitable institutes—it should not be used like the ordinary lotions of harmless drugs. We do not speak at random when we say that several cases of its injurious influence on the system have come to our knowledge. In one instance there was a fatal issue, which was caused by a long-continued daily employment of a strong solution to both eyes.

We have seen the following prescription in the hands a of gentleman, for whom it had been prescribed to dilate the pupil for *supposed* cataract:—

Atropiæ sulph. gr. xxiv.
Aquæ dist. ℥vj.

M. ft. mixt. to be used three or four times a day as a lotion.

As a rule, atropine should not be used except under the watchfulness of a medical man, whose hand should, for the most part, apply it.

Mr. Walton's experience adds testimony to what we have said. He has seen the system affected in two instances, in consequence of a single application of a few drops of a solution of atropine, containing six grains to an ounce of distilled water. During the succeeding night there was very great thirst, dryness of mouth, difficulty of deglutition and of articulation, and disturbed hearing.

For most practical purposes, two grains of atropine to an ounce of water will be strong enough. When a surgeon desires to have the highest degree of pupillary dilatation, two more grains may be added, and even a stronger solution may be used, if but a small drop of it be placed on the conjunctiva.—*Medical Circular.*

*Saturnine Poisoning treated by the Iodide of Potassium.*—Dr. H. Swift states (*New York Medical Times*) that the treatment of saturnine poisoning by iodide of potassium has been tried in the New York Hospital in twenty-three cases, and with highly satisfactory results. "In thirteen instances the urine was submitted to the chemical analysis, and the investigation has established the fact that the lead may be eliminated from the system by the iodide of potassium, and found in the urine. In no case was the lead detected before the administration of the remedy. The chemical analyses were made by Professor Outram, and the results of his experiments are perfectly reliable. All the patients began to improve rapidly after this treatment was adopted, though they had previously resisted the ordinary means. No bad effects resulted from the long-continued use of the remedy. In two cases, as M. Melsens suggests may occur, the symptoms were at first slightly aggravated—one of them was profusely salivated while under treatment, and the other slightly so. One patient also suffered from coryza and gastric disturbance for a few days; but the treatment was only suspended for a short time. One patient was under the influence of the iodide of potassium for six months, one for five and a-half, and another for four months. In Case 6, the urine was examined shortly after the treatment was commenced, and merely a trace of lead was detected. The quantity sensibly increased, until it was clearly shown both in the urine and saliva; and, as the patient convalesced, it disappeared entirely, and the iodide of potassium was found abundantly in the saliva. In Case 5, we did not suspect the existence of lead poisoning until after the patient had been put upon treatment for constitutional syphilis. While under this treatment, a well-defined 'blue line' appeared upon the gums. The urine was then examined, and found to contain lead. Of the twenty-three cases treated by the iodide of potassium, sixteen have been discharged cured, and three so far relieved as to be able to resume their ordinary duties; four are still under treatment, and are gradually improving. Thirteen of the patients suffered from lead colic, complicated with neuralgia, arthralgia, &c.; four had paralysis of the wrists, and in six the paralysis was general."—*Medical Times and Gazette.*

*Common Salt as Remedy for Intermittent Fever.*—Dr. J. C. Hutchinson, of New York, has lately employed this remedy in twenty-two cases, upon the recommendation of Dr. Lattimore. The formula employed was the following:—℞ Chloridi sodii ℥viii.; ulmi pulv. ʒiii.; aq. bullientis f. ℥viii. Infuse two hours, and strain. A tablespoonful was given every two, three, or four hours; so that five or six doses might be taken during the apyrexia. The following were Dr. Hutchinson's conclusions:—"1. Although inferior to cinchonia and its preparations, it yet forms a very good substitute for them in intermittent fever, having failed, as we have elsewhere seen, to produce a speedy suspension of the paroxysms in 31·8 per cent. of the cases only; in a majority of cases, therefore, it may be substituted for quinia. 2. It may be used instead of, and, indeed, preferably to, quinia: first, in cases not unfrequently met with, where the latter remedy is forbidden by the very unpleasant nervous and cerebral symptom it produces (delirium, tinnitus aurium, cephalalgia, faintness, &c.), an example of which I have recently seen in the New York Hospital, when sulph. copper was substituted. Secondly, where quinia, from frequent repetition, has lost its effect in ague. Thirdly, it is commended on the score of economy, which is a consideration of importance to the poor especially, who are now in a measure debarred from the use of quinia by its high price. And, fourthly, it is always at hand, whilst quinia sometimes cannot be obtained. 3. It has been found to be more energetic in curing ague than any of the vegetable or mineral tonics commonly used for that purpose, excepting bark; and should, therefore, be preferred to arsenic, which has been ranked by M. Andral, Professor Wood, and, indeed, most other authorities, next in value to quinia. And, moreover, I think arsenic should never be used until after quinia and common salt have failed to do good, on account of its unpleasant and sometimes disastrous consequences to the general system and stomach, and the increased facilities it affords for using the remedy as a toxicological agent."—*Medical Circular.*

*Sulphate of Bebeerine in Diarrhœa.*—Mr. Matthews, of Manchester, strongly recommends in the *Lancet* the use of sulphate of bebeerine as a remedy for severe diarrhœa; in fact, he states that he has found it "a very near approach to a specific, and that, with a very few doses, as a rule—indeed, in many instances, its effects are magical, for in the course of half an hour I have seen a patient restored from intolerable anguish to perfect ease." He generally first gives a pill, consisting of two grains of calomel and half a grain of opium, and if there is great pain, or the vomiting is urgent, orders a sinapism to the scrobiculus cordis, and then follows up with the following mixture:—sulphate of bebeerine twelve grains, sulphuric acid and rectified ether, of each twelve minims, cinnamon water six ounces; mix. One ounce to be taken every four hours.

*Lactic Acid in Dyspepsia.*—Dr. C. Handfield Jones, in the *Association Medical Journal,* advises the use of lactic acid in dyspepsia. He has chiefly given it in cases of irritative dyspepsia, where the digestion was painful and imperfect, and had been so for some time; he does not advise its use at the commencement of the treatment in a severe case, but only after the irritation and vascular erethysm is somewhat reduced. It should be employed in doses of fifteen to twenty minims, in a half ounce of water, and taken *at* meal times; he states that it seems to mingle with the food, and to supply one of the constituents of healthy gastric juice, which is probably imperfectly produced. Its use need not be confined to cases of dyspepsia, but may be extended to all cases where it is desirable to improve the tone and power of the stomach. It is pleasant, occupies but little space, and the only objection to its use is its present high price; but if much employed it could probably be obtained cheaply.

*A new Solvent for Collodion.*—MM. E. Mather Plassy and Iwan Schlumberger have proposed wood spirit, or methylic alcohol, as a substitute for ether for dissolving collodion. For this purpose it has many advantages, as it is not so volatile as ether; a thicker and more uniform coat can be applied on glass for photographic purposes. The solution of collodion thus prepared is capable of dissolving a much larger quantity of iodide of potassium than an etherial solution, and will consequently yield a more sensitive coating. The only inconvenience attending the use of wood spirit, and which it is important to notice, is, that during its slow evaporation from the surface of glass, &c., a certain quantity of formic acid is produced. By adding a little alcohol of sp. gr. forty degrees to the wood spirit, and gently warming the glass plate upon which the coating is to be put, the formation of the acid may be obviated. The low price of wood spirit will, we are sure, induce many photographers to test the matter.—*The Dublin Journal of Industrial Progress,* from the *Bullet. de la Soc. Indust. de Mulhouse.*

[We need not allude to the various uses which may be made of such a solution in medicine, either as a means of applying collodion itself, or as a menstruum for other more important medical agents.]

*Iodo-Tannic Syrup.*—This syrup is directed to be prepared according to the following formula:—Iodine, two grammes; Extract of rhatany root, eight grammes; Water and sugar, of each a sufficient quantity to make a syrup, one kilogramme. Care must be taken that the extract of rhatany root employed for this purpose should be completely soluble; and in order to secure this complete solubility, the extract should be prepared *in vacuo*. The iodine is then to be dissolved in a small quantity of alcohol, and subsequently mixed with the extract of rhatany root, previously dissolved in water. The mixture is then to be poured into a glass mattrass, and carefully set aside for some hours, so that the reaction of the iodine and the extract of rhatany upon each other may be complete; which will be known by the deposition of a brown pulverulent mass. This is to be entirely separated by filtration, and then repeatedly washed with water, so as to remove any portion of iodine that it may contain; the various strained or filtered liquids are to be mixed together, and submitted to slow evaporation by means of a vapour bath, and when sufficiently concentrated, the sugar is to be added, so as to produce a syrup, which, when well prepared, should have a fine red colour, and a very agreeable taste. It will contain six centigrammes of iodine in thirty of the vehicle, and it may be preserved without undergoing alteration for an almost indefinite time. In preparing this syrup, care must be taken that glass vessels be employed.

*Normal Iodo-Tannic Solution.*—This solution of iodo-tannin is directed to be prepared by triturating together five grammes of iodine, forty-five grammes of tannin, and one thousand grammes of water. The solution of the iodine and tannin in the water is soon effected, when it is to be filtered, and concentrated, by careful evaporation, until it is so far reduced as to amount to one hundred grammes, after having sedulously examined it by means of starched paper.

*Ioduretted Iodo-Tannic Solution.*—This solution of iodo-tannin is directed to be prepared in the same manner as the former, by triturating together five grammes of iodine, ten grammes of tannin, and ninety grammes of water, and subsequently promoting the solution in a glass mattrass, by means of gentle heat obtained from a sand-bath. This solution possesses the decided advantage of retaining the iodine it contains, in such perfect solution, that it is not deposited whatever amount of water may be added with the intention of diluting it, for it thus becomes soluble in every proportion of this vehicle; and it may therefore be substituted for the various solutions of iodine made by the intervention of either alcohol or potassa. The two latter solutions of iodo-tannin are recommended for external use, and the first—the syrup of iodo-tannin—for internal use, by Messrs. Socquet and Guillermond, who, in a paper communicated to the "Bulletin Général de Thérapeutique," state that, in the preparation of the syrup of iodo-tannin, they invariably avail themselves of tannin contained in rhatany root, whereas, in the preparation of the solutions for external use, they make use of tannin obtained from oak-bark.—*Annals of Pharmacy.*

*Arseniate of Iron in Herpetic and Squamous Eruptions.*—M. Duchesne Duparc has read a memoir on this subject before the Academy, at the conclusion of which he advances the following propositions as the result of his researches:—

1. Arseniate of iron possesses, in common with all other arsenical preparations, unquestionable remedial properties, applicable to the treatment and cure of herpetic and squamous affections of the skin.

2. The great advantage of that substance is, that it may be administered in sufficient doses, without giving rise to any of the consequences with which various other arsenical preparations have been justly reproached.

3. The arseniate of iron, whether given singly or in combination with other substances, ought always to be administered in graduated doses commencing from one-twentieth, one-tenth, or even one-fifth of a grain, according to the age, the constitution, and above all, the state of the digestive organs of the patient.

4. Numerous facts accurately observed authorize M. Duparc in concluding, that a daily dose of one-fifth of a grain of arseniate of iron, uninterruptedly repeated during the necessary time, is competent in the adult to effect the cure of an herpetic or squamous affection, however extensive or long-established.

5. No absolute rule can be laid down with respect to the duration of the anti-herpetic treatment by arseniate of iron, for this must vary in accordance with the differences of age and constitution, the extent and severity of the disease, and, more than all, perhaps, in proportion to the degree of toleration which the digestive organs manifest for the remedy.

6. An anti-herpetic treatment by arseniate of iron in no degree excludes the employment of topical remedies of acknowledged utility, and it is materially assisted by the internal or external use of certain non-sulphuretted mineral waters. MM. Serres, Andral, and Rayer have been commissioned to inquire into the merits of this new remedy.—*Gaz. des Hôpitaux.*

*Radical Cure of Hernia by Iodine Injections.*—M. Jobert has presented to the Academy an account of three cases of inguinal hernia, which were radically cured by injection of the tincture of iodine into the hernial sac.

The first case was that of a young man, aged

18, who was affected with a complete inguinal hernia of the left side. It did not, however, descend to the bottom of the scrotum, and below was separated from the testicle by an elongated constriction. The bowel was readily reducible by the taxis, but immediately the patient coughed or stood on his feet it was again extruded.

On the 12th of May, having made an incision over the inguinal canal, he introduced a fine trocar, and injected through it 5 drachms of pure tincture of iodine. The patient suffered some little pain in consequence of the proceeding, and, upon its completion, the wound was united by the twisted suture, and dressed with simple ointment. In the evening, there was slight swelling in the inguinal region, but no constitutional disturbance.

On the 14th the swelling and redness were considerable, and, on removing the sutures, the wound was found imperfectly united. After some days, however, the redness and swelling disappeared, and cicatrization was accomplished. On the 5th June the patient left his bed, walked about, and coughed, without causing the least unnatural impulse of the abdominal viscera, or the slightest re-appearance of an external tumour. The left testicle (that on the affected side) remained of the same size as the right. He was directed to wear a suspensory bandage for some time, as a precautionary measure.

In the second case the patient, aged 33, was admitted into Hôtel-Dieu on the 18th November, 1853, with a hydrocele and a congenital inguinal hernia of the same side, and the two swellings, being separated from each other by a kind of hour-glass contraction of the tunica vaginalis, the upper part of the sac being occupied with intestine, and the lower with serous fluid and the testicle. M. Jobert resolved, if possible, to obliterate the tunica vaginalis, and so to cure at the same time both the hernia and the hydrocele. With this view, having first interrupted the communication between the tunica vaginalis and the peritonæum by means of pressure, applied to the inguinal canal, he passed a trocar into the lower portion of the constricted sac, and, after having let out the contents of the hydrocele, injected a small quantity of the pure tincture of iodine. On the following day the scrotum was red and slightly tender, and the affected tunica vaginalis distended with effusion of serum. The patient, however, manifested no constitutional disturbance, and complained of no pain. Day by day the swelling and redness diminished, and within seventeen days after the operation, the scrotum had regained its ordinary dimensions; but, on the affected side, both it and the spermatic cord were firmer than natural. A cylindrical cord existed through the whole of the inguinal canal, and extended along the course of the spermatic vessels to the testicle. A complete cure was obtained, and the patient left the hospital, able to walk without fatigue.

The third case was that of a congenital hernia of the left side, quite reducible, and equal in size to a large pear. The patient was twenty-seven years of age, and had been ruptured eight years. He had worn various bandages, in order to counteract his infirmity, only one of which had at all answered the purpose. As the patient ardently desired to be cured of his disorder, M. Jobert, in the presence of his colleagues, punctured the hernial sac, and injected into it a small quantity of the pure tincture of iodine. The patient was then placed on his back, with his legs flexed slightly on the thighs, in which position they were maintained by a bolster. Almost immediately after the injection the hernial sac began to swell, and in fifteen hours the sac had become as large as if filled with intestine, and communicated a fluctuating half-solid character to the finger. The parts remained in this condition for eight days, after which the swelling rapidly diminished. Twenty-eight days after the operation the track of the spermatic cord was occupied by a cylindrical substance so compact and hard, that the patient was able to rise from his bed, to walk about, and to sit down, without the smallest appearance of an intestinal protrusion exhibiting itself.

The cure remained complete four months after the operation, the testicle had not atrophied, and the inguinal canal was occupied by a firm, solid cord, into which the vaginal process had become converted by its obliteration.

M. Jobert does not allow the tincture to remain permanently in the sac, but withdraws it by means of the syringe. In all cases of congenital hernia, or whenever the sac is distended with fluid, or is thickened and condensed, and has become adherent to the surrounding structures, M. Jobert penetrates it at once with a trocar, without first dividing the skin with a scalpel; but whenever the sac is thin, moveable, and easily displaced by pressure, he prefers to divide the skin with a scalpel, and expose the sac before puncturing it.

The superiority which the method by injection offers to all other proceedings which have been devised for the radical cure of hernia, depends, says M. Jobert, on its harmlessness and simplicity; and M. Velpeau deserves the credit of having, in his "Annales de Chirurgie," published ten years ago, first noticed the advantages of iodine injections for effecting the radical cure of herniæ.—*Gazette des Hôpitaux.*

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THE

# Dublin Hospital Gazette.

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## JERVIS STREET HOSPITAL.

### *Case of attempted Suicide by Hanging, with Observations.*

BY JAMES S. HUGHES, M.D., F.R.C.S.I.,

EXAMINER IN SURGERY IN THE QUEEN'S UNIVERSITY IN IRELAND.

*Reported by* Mr. W. E. Lynch.

J—— J——, a coach trimmer, æt. 63, of small stature and light weight, was found by a fellow-workman suspended, by means of a rope round his neck, from the rafter of a coach factory loft, at a quarter before 12 o'clock, on the 2nd of February, having been observed ascending the loft about ten minutes previously; he was cut down as soon as assistance could be procured, and brought on a door to Jervis-street Hospital, in a state of complete insensibility, at five minutes past 12 o'clock. On admission his respiration was slow, laboured, and stertorous, with puffing of the cheeks during expiration; heart's action laboured; pulse at wrist 40 in the minute; face livid and somewhat swollen; a few frothy bubbles were seen between the lips, which latter were of a dark purple colour; eyes glassy, not prominent; pupils rather contracted than dilated, but perfectly insensible to light; tongue not protruded; temporal vessels extremely turgid, and ropy to the touch; extremities cold; absence of hæmorrhage from the eyes, ears, and nose; a dark circular ring, with a depression in the centre, encircled the neck, taking a course from below and before, upwards and backwards, crossing the larynx.

It being obvious from the existence of the foregoing symptoms, that the patient was labouring under congestion of the brain or apoplexy, the result of compression of the large blood-vessels of the neck, Mr. Hughes, who was visiting the hospital at the time, ordered the left temporal artery to be instantly opened: as the blood, however, issued from it but slowly, Mr. Hughes thought it advisable to have the right temporal artery likewise opened, from which the blood poured out freely; as the blood flowed the pulse rose, and improved in character; the bleeding was encouraged till about twelve ounces had been abstracted, at which period the respiration had become less laboured, the stertor had subsided, and the pupils exhibited evidence of sensibility to light. A turpentine enema was now administered; heaters were applied to the feet, and sinapisms to the calves of the legs. Ten grains of calomel were subsequently shaken on the tongue.

At a quarter past one o'clock (one hour and ten minutes after admission into hospital), the patient was gradually regaining consciousness; at two o'clock he spoke coherently, and had perfect power over his limbs, but he neither knew where he was, nor did he appear to have the most remote recollection of having attempted self-destruction.

Six o'clock.—Slightly delirious; is very restless; answers questions in a very incoherent manner; is constantly endeavouring to tear the dressings from the temples. As the first enema produced no effect, a second was administered, which was followed by copious vitiated evacuations, after which he appeared to be more tranquil, and fell into a tolerably calm sleep; but, whilst he slept, an occasional puffing of the cheeks was observed during the act of expiration.

February 3rd.—Passed the night in a tolerably easy manner, being occasionally restless; pulse 104, hard and somewhat irregular; complains now much of his head; is constantly annoyed by a stridulous laryngeal cough; act of swallowing accompanied with pain; power of motion perfect; sensation good everywhere but in his ears and jaws, where the sense of feeling is considerably diminished.

Ordered—

℞ Hydrarg. submuriatis, gr. xii.
Pulv. Jacobi veri gr. vi.
Sacch. alb. ℈i. M.

Divide in chart. æq. vi. Capiat unam tertiâ quaq. horâ. Apply cold lotion to head.

4th.—Much improved; pulse regular; head relieved, still, however, suffers at intervals from slight uneasiness in it, increased by the act of coughing, which is still annoying, and of a laryngeal character. Ordered to take one grain of calomel every sixth hour.

5th.—All uneasiness in the head removed; cough less troublesome; slight salivation, and mercurial fœtor present. Omit the calomel.

15th.—He is now so far recovered that the only obstacle to his immediate removal from the hospital is the possibility of his repeating the attempt at suicide, as he is suffering under great depression of spirits, and speaks despondingly of his circumstances and prospects.

20th.—The patient's spirits have much improved, but he received a great shock since last report, on having been told, in a very unguarded way, by a fellow-patient, of his having made an attempt on his life, of which he had not the most remote recollection.

April 30th.—Dismissed quite well.

*Observations.*—The modes of death by hanging may be thus summed up, not in the order of their frequency, but of their fatality:—*First*, Luxation of the odontoid process of the second cervical vertebra, or fracture of the spine, and consequent injury to the medulla spinalis; *Second*, Suffocation from pressure on the windpipe, producing complete obstruction to respiration; *Third*, Congestion of the brain, or apoplexy from arrest of the return of blood from the head to the heart, the result of compression of the great bloodvessels of the neck; *Fourth*, Injury inflicted by violent and prolonged pressure on the important nerves of the neck.

The first cause of death by hanging, or that by luxation or fracture of the cervical vertebræ, is rarely met with, even in those who have been criminally executed; thus, in four cases of this description, the late Dr. Houston found the "cervical vertebræ uninjured, and also the spinal marrow and the brain;"* and in the case of Hurley, who was hanged in August, 1853, for the murder of a young girl at Dunsandle Wood, although the body had fallen from the drop, "with a tremendous jerk, and oscillated for a few minutes," yet we are informed by Dr. Croker King, who made a minute examination of the culprit's body eighteen hours after the execution, that "there was no dislocation or fracture of the vertebral column or injury of the ligaments or spinal cord."† Sir Benjamin Brodie states, that he has examined the bodies of several persons who had been hanged, and never found the spine to have been injured in a single instance.

It is now generally admitted that the most frequent immediate cause of death by hanging is that by suffocation, or exclusion of air from the lungs, the result of pressure of the rope or ligature on the windpipe, but in many cases death would appear to be produced by the combined influences of suffocation and apoplexy; indeed, according to Remer and Caspar, asphyxia and apoplexy operate in the greater number of cases of hanging as mixed causes of death. The rapidity of death by suffocation will depend on a variety of circumstances, which may be thus enumerated, viz.: the exact position of the rope or ligature round the neck, the weight of the body, the height of the fall, the age of the patient, and the quantity of air in the lungs at the moment the ligature was applied to the neck. The following are the physiological results which ensue soon after the respiration has been completely stopped. The heart, after a few beats, propels impure blood, that is, blood no longer oxygenated, to the brain, and, as the action of the heart and diaphragm depend on nervous energy, and as nervous energy requires a supply of pure or oxygenated blood, it follows that when the supply of pure arterial blood is cut off, the heart and diaphragm soon cease to act.‡

The heart continues to act for a brief period after respiration has completely ceased. When speaking of the rapidity of death in these cases, Dr. Taylor says: "Supposing the hanging to be unattended with violence to the parts about the neck, it is possible that some individuals might be resuscitated after five minutes' suspension, or longer; others again may not be recovered when cut down immediately after suspension, a fact which depends probably on the different degrees to which asphyxia or apoplexy have extended."§ Sir B. Brodie is of opinion that under ordinary circumstances it rarely happens that the heart continues to act for more than four minutes after the trachea has been completely obstructed; and he thinks in weak and exhausted animals the period to be shorter than in the strong and vigorous.

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* Quoted by Dr. Beatty.

† Dublin Journal of Medical Science, New Series, No. XXXV., p. 89.

‡ See Brodie's Lectures on Physiology and Surgery.

§ Taylor's Medical Jurisprudence, p. 634.

The great majority of physiologists are of opinion that once the heart's action has positively ceased, in consequence of the suspension of respiration, it cannot be renewed. Dr. Carpenter, however, says: "The cessation of the heart's action is due to two distinct causes, acting on the two sides, for on the right side it is the result of over-distention of the walls of the ventricle, owing to the accumulation of venous blood, and on the left to deficiency of the stimulus necessary to excite the movement. The property of contractility is not finally lost nearly as soon as the movements cease, for the action of the right ventricle may be renewed for some time after it has ceased, by withdrawing a portion of its contents, either through the pulmonary artery, their natural channel, or more directly by an opening made in its own parietes, in the auricle, or in the jugular vein; or, on the other hand, the left ventricle may be again set in action by renewing its appropriate stimulus of arterial blood; hence, if the stoppage of the circulation has not been of too long a continuance, it may be renewed by artificial respiration, for the replacement of carbonic acid by oxygen in the air cells of the lungs restores the circulation through the capillaries, and thus, at the same time, relieves the distention of the right ventricle, and conveys to the left the due stimulus to its action."*

Although in the third mode of death by hanging, or that by apoplexy, the sudden compression of the great bloodvessels of the neck cannot completely arrest the circulation of blood, inasmuch as it cannot reach the vertebral vessels; yet, if the pressure be sufficiently long and forcibly sustained, it can, by delaying the return of blood from the head to the heart, produce extreme congestion of the cerebral vascular system, which, as proved by post-mortem investigations, may, or may not be accompanied by extravasation. As, however, in a considerable number of the cases of attempted suicide by hanging, which have recovered, no paralysis ensued, we have some reason to conclude that in many cases the apoplexy which results from compression of the great bloodvessels of the neck is of the congestive form, a point of considerable practical importance, inasmuch as it is in that particular form of apoplexy that the voice of the profession is in favour of bloodletting.

Compression of the important nerves of the neck must necessarily be followed by injurious results, although it may not act as a proximate cause of death in these cases. Thus, J. J. suffered from considerable distress from laryngeal cough for several days after the attempt at suicide; he likewise complained of a loss of sensation in his jaws and ears, which were obviously ascribable to the forcible compression to which the nerves of the neck were subjected whilst the patient was in the state of suspension.

Much of the success of the treatment of a case of attempted suicide by hanging will depend on the nature of the injuries inflicted, the period at which assistance is procured, and a proper discrimination in the selection of remedial measures. Thus, if the surgeon is summoned to a person within a few minutes after he has suspended himself, although the breathing may have completely stopped, yet, provided there is neither dislocation or fracture of the vertebræ, and consequent injury of the medulla spinalis, animation may, in many cases, be restored by an immediate recourse to artificial respiration. Electricity, or electro-galvanism, if within reach, ought at the same time be applied to the cardiac and spinal regions; if, on the other hand, the patient is cut down before respiration has ceased, and that symptoms of congestion of the brain or apoplexy should, as in J. J.'s case, present themselves, bloodletting ought at once be resorted to. Although, as already stated, there is reason to believe that the apoplexy which results from compression of the great bloodvessels of the neck is frequently of the congestive form, yet, as we possess no infallible rule by which we can positively pronounce, in these cases, whether cerebral hæmorrhage has taken place or not, we should in every such case exercise as much caution in the abstraction of blood as we would in apoplexy from other causes; here, as elsewhere, we should, whilst endeavouring to remove congestion, or arrest hæmorrhage, ever bear in mind that the brain has suffered from a violent shock, for the repair of which the system will require its best resources.

Much difference of opinion has existed both as to the quantity of blood to be taken away in cases of apoplexy, in which bleeding is indicated, and, as to the precise situation from which the blood should be abstracted. The condition of the pulse, and the effects of the withdrawal of blood on it, will be the safest guides as to the former; with regard to the latter, we generally select the temporal arteries, agreeing, as we do, with Abercrombie, who, whilst treating on the subject, says:—"Much importance has been attached to bleeding from the jugular vein, as more likely to give immediate relief to the head; but we must remember, that the only jugular vein that can be opened is the external jugular, which has little communication with the brain, and, consequently, bleeding from it is much inferior to bleeding from the temporal artery."* The rapidity of relief from bleeding was remarkable in the case of J. J., who, in all human probability, is indebted for a prolongation of his life to the lightness of his weight; to the shortness of his fall; to the rope having been adjusted round his larynx instead of his trachea, whereby suffocation was delayed; to his having been detected soon after the act of suspension; and, finally, to timely bloodletting, by which the congestion of the brain, under which he was obviously sinking on admission to the hospital, was speedily removed.

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* Carpenter's Physiology, page 545.

* Abercrombie on the Brain, page 289.

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## RICHMOND HOSPITAL.

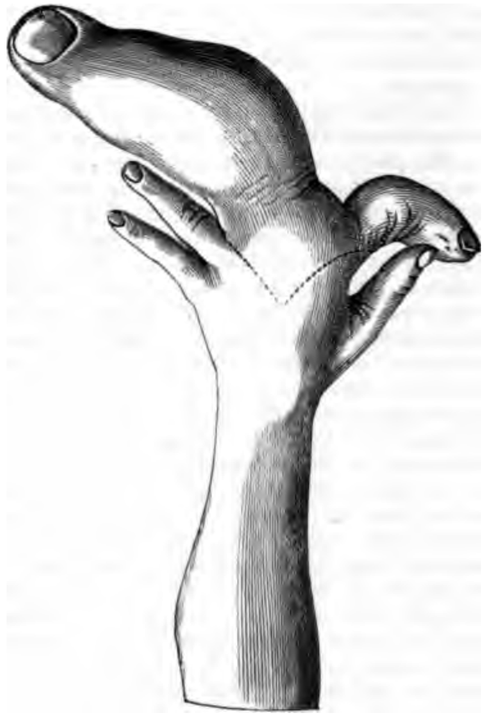
### *Case of Congenital Hypertrophy of the Index and Middle Fingers of the Left Hand.*

By ROBERT ADAMS, Esq.,

SURGEON TO THE HOSPITAL.

At a meeting of the Pathological Society, April 8th, 1854,[*] Mr. Robert Adams brought forward the case of a girl, æt. twelve years, who had been born with the index and middle fingers of her left hand in a state of hypertrophy. The subject of this observation is a native of the Isle of Achill, and was sent up to be placed under the care of Mr. Adams in the Richmond Hospital, by his relative, Dr. George Montgomery. At the period of her admission into hospital (viz., April 7th, 1853), the enlargement from congenital hypertrophy of the middle finger had proceeded to such a degree, and one of the fingers had reached such a magnitude, that Mr. Adams could not meet among the cases of this lesion recorded any parallel to it.

The cast of the hand (represented by the woodcut) laid on the table, he said, would at once give an idea of the nature of the deformity.



The girl is healthy and intelligent, and, with the exception of the left hand, is in other respects well formed. When we look at the cast of the forearm and hand, we notice that the hypertrophied middle finger is of an enormous bulk and length, compared with that of the opposite hand; for example, while the middle finger of the right or normal hand of this little girl measures three inches and a-half, the length of the hypertrophied middle finger of the left hand amounts to eight inches; its circumference at its largest part gives the same measurement. The nail of this middle finger is very broad and strong, fully an inch square, and constitutes a very remarkable feature in this extraordinary case. The direction of this finger was altered, and much adducted towards the ulnar side; the index finger was also hypertrophied, but by no means to the same degree as the middle finger, it was drawn towards the radial side, and at the same time incurvated in this direction, so as to be greatly divaricated at its extremity from the middle finger.

The index was four inches and a-half long, and the measurement of the circumference of it, at its greatest part, amounted also to four inches. On the dorsum of the metacarpus, as it were continuous with the root of the hypertrophied middle finger, there existed a tumour apparently fatty, and the size of half an egg; above this, and corresponding to the back of the carpus, another distinct swelling was situated, nearly of the same size and form; a third tumour, also apparently of a fatty nature, but not circumscribed, existed on the upper part of the forearm (see woodcut).

The skin covering the hypertrophied fingers was of a deep pink colour, its temperature was natural, as was also the sense of feeling. She had the power of moving the joints, but imperfectly, and she noticed that their movements had been becoming each day more difficult from the increasing growth of the middle finger. As the girl grew older the feeling of personal deformity became a more constant source of discomfort and unhappiness to her.

As to the history of the origin of this abnormal condition of the hand, I learn from Dr. Montgomery that the child was born with the index and middle fingers three times their natural size. The child's father said, that when she was born her middle finger was just the size of his own little finger. Its growth at first was only in proportion with the child's growth; a year or two ago it had commenced to increase, and continued to grow more rapidly so as to attain its present size.

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[*] The time taken to execute the accompanying woodcut caused some delay in bringing forward this case.

In this case it was a matter for deliberation, whether anything further should be done than to cut off the principal offending parts, namely, the hypertrophied fingers, which it was thought could be readily done, and without being very likely to be productive of any danger to life or the functions of the wrist joint, so important to preserve in a state of perfect integrity. At the same time it was to be borne in mind, that such an operation would not remove the whole of the abnormal parts, and the patient should thus be liable to some recurrence of the evils she now laboured under.

To remove all the fatty mass which lay on the dorsum of the wrist and forearm, together with the whole of the two metacarpal bones, might be feasible, but on due deliberation I did not think that in such a case, where the life of the girl was not in danger from the deformity, it would be justifiable to have recourse to such an extensive dissection, and to encounter the danger which might be anticipated to result from the constitutional irritation which might be expected to follow the mere dissection out of the fatty masses. Moreover, I feared much that the attempt to remove the entire of the hypertrophied metacarpal bones would involve the opening into some of the metacarpal joints, and thus would indirectly be made a communication with the external air and the interior of the wrist joint, likely to be followed with the worst consequences.

Of the two evils, therefore, it was decided, that it appeared to be the lesser to leave the three fatty diffused swellings on the dorsum of the hand and forearm, together with some portions of the two hypertrophied metacarpal bones, than to encounter the risk of exciting constitutional irritation, and more particularly that of exciting inflammation of the wrist joint. We therefore came to the determination not to interfere with the tumours, but to remove the two hypertrophied fingers by sawing through their metacarpal bones as high up as we conveniently could.

*Operation.*—An incision was made on the radial side and dorsum of the metacarpal region down to the bone, upwards towards the annular ligament of the wrist joint; a similar incision was extended to the ulnar side of the hypertrophied middle finger, to meet the former at an acute angle salient upwards; each metacarpal bone was cut through obliquely with a small saw in the direction of the two incisions (see lines marked in woodcut), and the hypertrophied fingers removed: the greatly divaricated fingers were then approximated as much as possible, and the integument which had covered the radial side of the index finger was applied to the cut surface on the radial side of the ring finger and its metacarpal bone; one suture was applied at the lower angle of the wound. There was but very little hæmorrhage, and as of course chloroform was used, we may say there was no pain.

Mr. Adams laid on the table the amputated part, comprising also the lower extremities of the two corresponding metacarpal bones, which were also somewhat hypertrophied. A longitudinal section of the middle finger was made, and exhibited the hypertrophied head of the metacarpal bone and the three phalanges of a length greater than they measure in the skeleton of any giant preserved in any museum.

The epiphyses were not yet ossified, the cartilages and synovial apparatus were perfect, the bones were firm and of a normal structure, but the section of the finger everywhere exhibited a vast predominancy of adipose structure, which constituted, with the elongated and hypertrophied bones, the bulk of the deformed mass. The extensor and flexor tendons were thrown to the radial and ulnar side of the index and middle fingers, thereby accounting for the deviations from the right line which the fingers had undergone. The wound healed rapidly, and the patient was discharged July 23rd.

Mr. Adams wishing to learn how this plan had succeeded, before he brought the case forward, wrote to Doctor George Montgomery for information on this point, and learned from him, by letter dated the 14th March, 1854, that this little girl has excellent use of her left hand; she can earn her bread, sew, and do crotchet work, and pass unobserved, which she could not do before. Her mother told him she could make as good use of this hand as any other little girl in the village could make of theirs.

She expresses herself as much gratified by having been relieved of a source of "discomfort and reproach."*

*Observations.*—The cases of congenital hypertrophy of the fingers as yet published are not very numerous.

Dr. John Reid† has given the particulars of a case of this kind, in which the radial artery of the affected side seemed to be double the size of the opposite and healthy one.

Surgeon Robert Power, of this city, some years ago adduced a case in the *Dublin Journal,*‡ of congenital malformation of the middle finger, in a child aged five years; in this case, if we are to judge from the engraving, the fatty tissue was very great, increasing the breadth of the finger more in proportion than the length, and in this case, also, there was apparently a fatty tumour connected with the base of the first phalanx.

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* See Dr. Jacob's observations on the operation of removing from a man a production resembling a tail. Dublin Hospital Reports, vol. iv., p. 576.

† London and Edinburgh Monthly Journal of Med. Science, 1843, p. 198.

‡ Dublin Journal of Med. Sciences, May, 1840, vol. xvii. p. 243.

Mr. T. B. Curling has introduced into the *Medico-chirurgical Transactions** a very interesting account of "a case of congenital hypertrophy of the fingers in a girl, with a notice of some similar cases."

In Mr. Curling's case the finger most enlarged was the index, which measured five inches and a quarter in length, and four inches in circumference, he noticed that the middle finger has a lateral inclination outwards, occasioned apparently by a displacement of the extensor tendon, which formed a bridle along its outer edge; he also observed that there was a fulness of those parts of the hands from which the hypertrophied fingers proceed, as was the case also in Mr. Power's, as well as in this I have adduced.

In his case two of the fingers were much enlarged, and all their structures, when compared, seemed equally hypertrophied, so as to constitute simply an enlarged finger a little curved; he observes that all parts seemed equally hypertrophied to excess,—the bones, articulations, integuments, and nails. He adds: "It would seem as if the formative powers, which we see in some few cases exercised to excess in every part of the frame, so as to make a giant, had been limited in this instance to an insignificant part of the extremities."

We learn from Mr. Curling that in the museum of the King's College, London, there is a cast of the left hand of an adult, in which the middle finger is hypertrophied, the others remaining of the natural size. The enlargement is uniform, and attended with a slight lateral inclination. The case is congenital, and the hands of other members of the family are reported to have been deformed in a similar manner.

There is also a cast of a case of congenital hypertrophy of the fingers preserved in the museum of the College of Surgeons, in Dublin, presented by Dr. Thomas Beatty.

Mr. Curling remarks, that in four of the cases adduced by him the hypertrophied fingers were bent to one side, and he suspects that in all of them the inclination was produced, as in his case of E. Hitchcock, by the tension of the displaced extensor tendon, which had not elongated in proportion to the increase of the size of the finger.

In conclusion, Mr. Adams said, that he thought the case worthy of the notice of the Society, on the grounds,—

First, that the middle finger in this example of abnormal hand had attained a size unequalled in any as yet published.

Secondly, as it is the only case in which the anatomy of the affected fingers has been displayed; and thirdly, he might add the only case yet recorded in which any feasible remedial measures had either been proposed or adopted.

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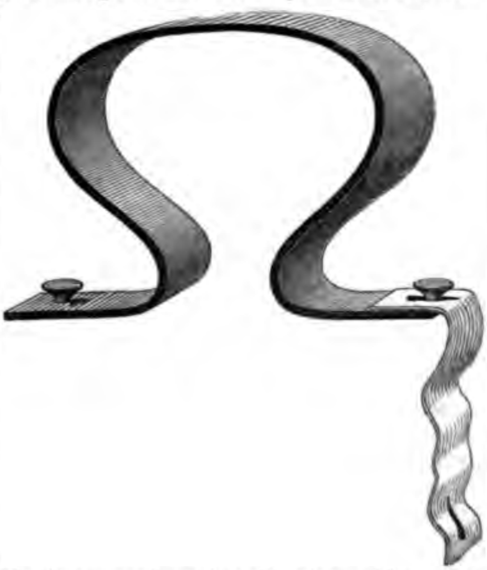
## SUGGESTION OF A NEW CONTRIVANCE FOR COMPRESSION OF THE BRACHIAL ARTERY.

By THOMAS DARBY, Esq., F.R.C.S.I.

*To the Editor of the Dublin Hospital Gazette.*

SIR,—Mr. Wilmot in his account of the case of aneurism in the forearm, published in the No. of this Gazette for 1st September, after describing a variety of instruments used to compress the brachial artery, suggests, that some modification of that of which he gave a woodcut might prove useful. I desire to take advantage of Mr. Wilmot's suggestion, and send you the accompanying etching of an instrument made by me since I read the case, and request you will be good enough to insert it in your next Number.



The instrument consists of a piece of hoop iron, hammered to increase its elasticity, and bent into a clamp, as represented in the etching; a vulcanised india-rubber strap, and a pad for the back of the arm; the ends of the clamp to which the strap is attached are left long enough to keep the strap from touching at the sides, and the pad prevents it touching the back of the arm; the pressure being thus limited to three points obviates constriction of the limb. I consider the elastic strap an essential part of the instrument, as it not only adds to the efficacy of the clamp by its backward force, but renders it less liable to be disturbed. Smyth tells me no instrument having a strap round the back of the arm was applied; at my request he has worn my instrument for some hours, and says he found it less irksome, and more easily borne than any instrument previously applied to his arm. I have ascertained by experiment that it can, without difficulty, be so adjusted as to control the artery.

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* Medico-chirurgical Transactions, vol. xxviii. (vol. x. of Second Series), page 337.

I am, Sir, your obedient,

THOMAS DARBY.

*Bray, 12th September*, 1854.

P. S.—Smyth has resumed his occupation as a blacksmith, and is perfectly cured.

## EXTRACTS FROM BRITISH & FOREIGN JOURNALS.

### THERAPEUTICS OF CHOLERA.

### DR. STEVENS' *Saline Treatment of Asiatic Cholera.*

We quote from the works of Dr. Stevens and Bushnan, the mode of practice adopted by the former in the prison of Coldbath Fields, in 1832. To patients labouring merely under the premonitory symptoms of diarrhœa, a seidlitz powder was administered. If there was sinking without purging, the more active purgative of sulphate of magnesia in combination with the seidlitz powder was given. The bowels being moved, then beef tea well seasoned with salt was allowed, and if there was irritability of the stomach, a sinapism was applied to the epigastrium, while thirst was allayed by seltzer, soda, or pure water, *ad libitum*. These simple measures generally succeeded in arresting the further progress of the disease. In the second stage characterized by cramps, coldness, or sinking of the pulse, the following powder, dissolved in half a tumbler of water, was administered every half-hour or so, according to the severity of the symptoms:—muriate of soda, a scruple, carbonate of soda, half a drachm, chlorate of potass seven grains. Severe irritation of the stomach was counteracted by the application of a large sinapism and heat, or burning at the stomach by the addition of an increased quantity of carbonate of soda to the saline powder. "In cases where life seemed rapidly ebbing, the collapse stage having been reached, a strong solution of the same salts, at a temperature of one hundred degrees, was thrown into the bowels. In extreme cases of collapse, this latter method succeeds far better than the injection of the vital electric salts into the veins. The saline mixture was administered half-hourly; and, in severe cases, the muriate of soda was increased to a drachm, or even more, as circumstances seemed to require. Where the stomach was extremely irritable, it was found that the carbonate of soda given by itself, or the tartrate of soda, in a state of effervescence, was the most effective remedy that could be employed for allaying the irritation, so as to enable the stomach to retain the stronger salts. The first object was to remove the excess of acidity in the stomach as one cause of the intense burning and local irritation, amounting even to inflammation, or the *gastro-enterite* of Broussais. This species, however, of the enterite cannot be cured either by gum water, taken internally, or by leeches applied to the pit of the stomach. The irritation is produced by a local cause, and can only be removed by local means. At this period of the disease, the alkaline carbonates are of infinite value; for example, by exhibiting the carbonate of soda, the fixed acids of the stomach are immediately neutralized. A large quantity of carbonic acid is evolved by the mouth, and the irritation of the stomach disappears almost as fast as if it had been removed by a charm. The fixed acids are immediately neutralized by the alkali of the carbonate; the muriate of soda, and the other natural salts of the blood are instantly formed in the stomach itself, and enter the circulation, that is, they mix with and become a part of the circulating blood, changing its properties and remedying its morbid condition. * * * * * The enema, exhibited and found so valuable, was composed of a large tablespoonful of muriate of soda, dissolved in warm water, sometimes with the addition of sugar or starch, and administered every two or three hours, at as high a temperature as the patient could well bear. Sinapisms were also applied as early as possible to the region of the stomach, betwixt the shoulders &c.; in the cold stage, frictions were frequently used with warm towels; and a pure air for the patient to breathe was considered a matter of the greatest importance to the person whose blood has been contaminated with poisoned air."—p. 38.

Such is the course recommended by Dr. Stevens, and the one pursued by him in Coldbath-Fields Prison, during the epidemic of 1832.—*Review of "Observations on the Nature and Treatment of Asiatic Cholera." By* WM. STEVENS, M.D.—*Glasgow Medical Journal, January,* 1854.

### *Treatment of Cholera by Castor Oil, at King's College Hospital. By* DR. JOHNSON.

All the cases of cholera which have come under my care in the hospital have been treated by castor oil, administered in a mode which I shall presently explain. We have called no case "cholera," which has not presented well marked symptoms of collapse. Fifteen of these cases, most of them in the very extremity of collapse, have been under treatment, and the result has been twelve recoveries and three deaths. One of the fatal cases was a child, six years of age, who died half-an-hour after admission, in consequence, as I believe, of a large dose of brandy, which had been previously administered by his mother. In a second fatal case, the oil had been given for some hours, and the patient was rallying, when the oil was discontinued, in consequence of the intestinal discharges appearing to be tinged with blood. I was absent when this case occurred, and although I impute no blame, yet I think that with the discontinuance of the oil, the patient's chance of recovery was taken away. In the third fatal case, a night nurse disregarded her instructions, and we have good reason for the belief that during several hours the patient had very little, if any of the medicine. Admitting, however, that the fatal result in these three cases was inevitable, the proportion of the recoveries yet remains four-fifths of the whole. The number of cases is small, but my hopes from this plan of treatment do not rest merely upon my own individual experience. I have carefully studied the results of the various modes of treating cholera which have been advocated and practised by different members of our Profession, and I have arrived at the conclusion that those methods of treatment which have been attended with the largest amount of success have been essentially eliminative in their tendency. I allude especially to the saline treatment of Dr. Stevens, the treatment by small and repeated doses of calomel as practised by Dr. Ayre, and the emetic plan of treatment. While, on the other hand, the largest amount of mortality has occurred in the practice of those who have given freely either opium or alcoholic stimulants,—a practice long since characterized by Dr. Stevens as that of adding one poison to another. For what reasonable explanation can we suggest for the phenomena of cholera except this,—that some mysterious poison enters the blood, which, while it exerts a powerful depressing and narcotic influence on the entire nervous system, in most cases excites a copious secretion into the stomach and intestines, whereby the poison is separated from the blood, and thus ejected from the body? And if this be the rational pathology of cholera, what treatment is so likely to be injurious as that which attempts, by narcotics and astringents, to arrest the discharges? What procedure so full of promise as that which has for its object to favour and assist the elimination of the poison?

I have not time, even if you could afford me the space, to detail the numerous facts and arguments which favour that view of the pathology and treatment of cholera which I advocate. I may, however, remark in passing, that there is no relation between the degree of collapse and the amount of fluid which is lost by purging; that in many cases there is rather an inverse ratio between the collapse and the diarrhœa, and that the former often decreases and disappears while the latter continues with unabated rapidity.

Assuming, therefore, that it is desirable to encourage rather than to suppress the diarrhœa, the agent best adapted to accomplish this result appears to be castor oil—the mildest, least irritating, and yet withal the quickest purgative which we possess. Our plan has been to give the oil in doses of half an ounce every half hour, and to continue these doses until the bowels are very freely acted on, when we give it at longer intervals, and discontinue it altogether as soon as reaction is fairly established. It is usually given in cold water. A patient with a cold tongue has not a very delicate sense of taste, and we have had no difficulty in administering the medicine. It sometimes excites vomiting, and we have had such decided evidence that the effort of vomiting is beneficial, that we are rather gratified than otherwise with this result. In every case we give cold water *ad libitum*. We put mustard poultices over the stomach, to relieve the pain which is usually complained of in that situation; we apply dry heat to the cold extremities, and friction to the cramped muscles; we most carefully avoid opium and brandy until the period of collapse is safely passed; and we have not as yet had one case of secondary fever. It may be well to observe, that the success of the plan depends upon a steady, persevering, watchful attention to every case, at every period of its progress. Let no one imagine that he has done all that is required, when he has ordered a nurse to give half an ounce of castor oil at certain intervals. He must be quite sure that his directions are fully carried out.

I must not omit to mention that one or two of our patients have been rescued from an almost fatal lethargy by an emetic of mustard and salt; and that in one case the addition of two drachms of oil of turpentine to one dose of castor oil appeared to act as a wholesome stimulant during the stage of icy coldness. As to the quantity of castor oil which may be given with impunity, I may state that more than one patient has had as much as a pint in the course of forty-eight hours, and that, in several cases in which, with extreme collapse, there has been a torpid condition of the bowels, we have given the oil in doses of a full ounce.

And now a word as to the treatment of epidemic diarrhœa, characterized by vomiting, purging, and cramp. There appears little reason to doubt that the unaided efforts of nature will suffice for the cure of by far the greater number of these cases, and that it is a matter of comparative indifference whether the patient is dosed with sulphuric acid or with carbonate of soda, except that the sulphuric acid in large doses must irritate the mucous membrane, and thus act as an aperient. I am persuaded, however, that the plan of attempting to check these excretory efforts by opium and astringents is as hazardous as it is unreasonable; and I trust that the time is not far distant when the Profession will be unanimous as to this important point of practice. We have recently, at the Hospital, cured hundreds of these cases by one or two doses of castor oil. Several of our nurses, and one pupil in attendance on the cholera patients, have been seized with severe premonitory symptoms of cholera. They have all been quickly cured by castor oil, and not one has passed into the stage of collapse. On the other hand, I have known, in the year 1849, an attack of vomiting and purging quickly converted into one of fatal collapse by one or two small doses of opium; and some of the worst cases of cholera that we have recently had under our care have been those in which, previous to their admission, medicines had been given for the purpose of checking the diarrhœa.—*Med. Times and Gazette, September*, 9, 1854.

### *Results of different Modes of Treatment of Cholera, extracted from a Paper by* JOHN CRAWFORD, M.D., *Physician to Cholera Hospital, Glasgow.*

*Treatment.*—The different modes of treatment employed in the various forms of choleraic disease, with their respective results, are exhibited in the following table:—

TABLE *showing the Results of five different Modes of Treatment.*

| | | 1 Salines alone. | 2 Salines with Adjuncts. | 3 Calomel. | 4 Stimulants | 5 Astringents with Opium. | Total. |
|---|---|---|---|---|---|---|---|
| Diarrhœa, ... ... | | 2 | 9 | 0 | 1 | 26 | 38 |
| Cholera, ... ... ... | | 13 | 53 | 13 | 6 | 29 | 114 |
| Collapse, ... ... | | 5 | 32 | 12 | 24 | 0 | 73 |
| | | | | | | | 225 |
| Cured | Diarrhœa, . | 2 | 9 | 0 | 1 | 24 | 36 |
| | Cholera, . | 13 | 46 | 7 | 1 | 24 | 91 |
| | Collapse, . | 0 | 7 | 3 | 2 | 0 | 12 |
| Died, | Diarrhœa, . | 0 | 0 | 0 | 0 | 2 | 2 |
| | Cholera, . | 0 | 7 | 6 | 5 | 5 | 23 |
| | Collapse, . | 5 | 25 | 9 | 22 | 0 | 61 |
| | | | | | | | 225 |

In reference to this table, the following explanations may be necessary. In the first place, in all, or mostly all cases, counter-irritation to the epigastrium and abdomen, by means generally of sinapisms—occasionally of turpentine and ammoniacal epithems, and in many cases by blistering—was used. It must, therefore, be understood, that the cases in the first column shared the benefit of this practice, though "salines alone" were administered as medicines. The "adjuncts" of the second column were almost exclusively opiate enemata and stimulants—wine, brandy, and ammonia; the opiate enemata being generally given in cases of cholera; and the stimulants—though cautiously—in collapse, or cases of cholera verging on that state. In choleraic diarrhœa, catechu and opium by the mouth were also occasionally used as adjuncts. The "salines" employed were the following:—1st. The combination of salts proposed by Dr. Stevens, viz., chlorid. sod., ℈i.; bicarb. sod., ʒss.; chlorat. potass., gr. vii. These quantities dissolved in water were given every half hour, every hour, or every two hours. 2nd. The saline enema of the same writer; a tablespoonful of chloride of sodium dissolved in warm water—employed only in collapse. And here, to avoid recurring to the subject again, I may mention that, although in several cases benefit appeared to be derived from its use, the advantage was only temporary, even when every precaution was taken to administer it properly. 3rd. The bicarbonate of soda, used as afterwards described. 4th. The same followed by acidulated draughts, as afterwards explained. And lastly (chiefly in cases of choleraic disease, with irritability of the stomach), the ordinary effervescing soda-powders.

*Calomel* was given in various doses in different cases—grs. x.—℈i. and upwards, to produce in the first instance a sedative effect on the patient (a result which it generally failed to accomplish); in smaller doses, gr. i.—v., at intervals varying from a quarter of an hour to three hours; and in some cases in doses of gr. i. every five minutes. Upwards of 110 grs. have been continuously exhibited in this way.

Under the head of *stimulants*, I have also included—somewhat strangely it may appear—the cases in which creasote and hydrocyanic acid were given to allay vomiting; but in almost all these cases, alcoholic stimulants were also given. That both creasote and hydrocyanic acid are useful in checking the vomiting in cholera (a combination of the two, 3 drops of the former and 2 of the latter, probably answers best) is undoubted; but in this respect they are far inferior to the bicarbonate of soda, and the creasote seems frequently to be very nauseous to the patient.

As to the effect of *stimulants*, the fourth column tells its own tale. It is, however, to be noted, that a number of cases—hopelessly advanced in collapse, and even moribund—were admitted, in which nothing could be done beyond endeavouring to keep up the heat and administering stimulants. These cases, hopeless under any treatment, no doubt swell the mortality under this head; but as a general rule, alike in choleraic diarrhœa, cholera, and collapse, the exhibition of alcoholic stimulants, except in a limited number of cases, and then in small quantities, has not, so far as I have seen, been productive of benefit. They are not even agreeable to the patient. Even in the prostration of collapse, the habitual drunkard will be found to turn with loathing from the proffered wine or spirits, and beg for cold water instead.

The *astringents* referred to in the fifth column, as conjoined with opium, were principally catechu, aromatic sulphuric acid, and acetate of lead—combinations found principally useful in choleraic diarrhœa and the milder forms of cholera. On the whole, I am inclined to prefer the acetate of lead and opium in pill (diacetat. plumb. gr. ii.-iii, op. gr. i.) This was also found very useful in the diarrhœa which occasionally recurs after a smart attack of cholera. In *collapse*, beyond an opiate enema, if the purging still continued, I would have nothing to do with opium.

The above table shows, that of these different forms of treatment (which I need not say were not practised at random, as for the sake of experiment, but were resorted to in accordance with what seemed to be the indications special to each case), the "saline" plan was on the whole the most successful. Of thirteen cases of cholera treated by "salines alone," all recovered; and although, on the other hand, all the cases of collapse thus treated died, yet what I have said of the great mortality in collapse treated by stimulants applies to them also. Several cases of collapse admitted in a moribund condition had, as a *dernier ressort*, Stevens' mixture and enema administered to them; and rank, of course, under the category of cases treated by salines alone.

Of the thirteen cases of collapse which were cured, seven are to be found in the second column as treated by "salines and adjuncts;" three were treated by calomel; two recovered under stimulants; and one recovered, to whom nothing was given except *iced milk*.

The *mortality* in collapse altogether was as 82·67 per cent.; that in collapse treated by calomel as 75· per cent.; that in collapse treated as in column second, was as 78·12 per cent. It is to be observed, however, that the former treatment (by calomel) was employed in a much less number of cases than the latter, and I feel persuaded that a more extended induction would not be favourable to the calomel plan. And, in contrasting or comparing the effects of treatment in cases admitted to hospital in a state of collapse, we must bear in mind the great diversity in the condition of the patients, depending on the time the collapse has existed, the distance from which the patient has been brought, and even the mode in which he has been conveyed. Under any circumstances, collapse from cholera is a fearful affection to treat; but in regard to patients actually brought into hospital in that state, their condition is so desperate as to afford little room for the operation of remedies, still less for the study of the effects, and the comparison of the advantages of different methods of treatment.

The "saline treatment" of Dr. Stevens, as practised by himself in the epidemic of 1832, and which consisted in the exhibition, "every half hour, or more or less frequently, according to the severity of the symptoms," of the chloride of sodium, the bicarbonate of soda, and the chlorate of potash, in the proportions above mentioned —the quantity of the bicarbonate being increased, or that salt being even given alone when there was great irritability of the stomach—and in the administration of the salt enema already described, had, according to his own account, results which, unfortunately, our experience at the Cholera Hospital failed to realize, successful as on the whole we found it. Thus, he tells us that, in the Coldbath Fields Prison, he treated on this plan "159 well-marked cases of cholera, including about 33 cases of collapse," with only one death out of that number. Highly-coloured and overdrawn as his description of the results of this treatment appear, as contrasted with the results we have obtained, there is one part of it which I can attest as being, if not free from exaggeration, at least founded on very broad basis of truth, namely, the benefit of large and repeated doses of bicarbonate of soda in allaying vomiting; and it was my experience of this fact, far more than his astounding statistics, his vehement asseverations, or his virulent abuse—unparalleled in any professedly scientific work—of all who had presumed to differ from his views, which mainly induced me to give his plan a fair and patient trial. I have repeatedly seen the most virulent vomiting effectually and speedily checked by doses of ℈ij. of the bicarbonate of soda; sometimes the vomiting was completely arrested by a single dose, more usually, however, it recurred after an interval, though not to the same extent as at first, and was again arrested by the same treatment; and under the continued administration of the medicine every hour or two, the irritability of the stomach steadily and strikingly diminished. This result has been obtained in cases where opium, creasote, and hydrocyanic acid, together with counter-irritation, had all been tried in vain; and has been observed both in cholera and collapse—although, like every other known remedy, the medicine in question will fail very frequently in the latter state.—*Glasgow Medical Journal, April*, 1854.

### *Treatment of Cholera by Sulphate of Strychnine, proposed by* M. Abeille, *Physician to the Military Hospital of Roule.*

M. Gerardin read his report on a memoir on this subject before the Académie de Médécine, on the 5th of September, 1854. From this it appeared that from the 26th of April to the 3rd of June, M. Abeille had treated in this way twenty-two cases of cholera, in the stage of collapse; of these ten recovered, twelve died: all the patients were attacked with cholera in the hospital: these twenty-two cases form the first series, from which the deductions of M. Abeille are drawn.

From the 2nd to the 31st of July, M. Abeille had charge of thirty-eight cholera patients, also in the stage of collapse. On the first twenty-two of these he made his comments, as that number corresponded with the former; of these nine recovered, thirteen died, five were attacked in the fever wards, seventeen were admitted from without.

M. Abeille states, that even in those cases which terminated fatally, a decided temporary reaction was observed.

To minute doses of the sulphate of strychnine

(¼ to ½ a grain in the twenty-four hours), administered every hour in distilled water or solution of gum, he adds the application of from fifteen to forty leeches to the base of the thorax, according to the strength of the patient; if the vomiting be severe, a small piece of ice or some cold water should be given with each dose.

When reaction is established, warm drinks should be prescribed.—*Gazette Médicale, Sept.*, 1854.

M. Herard, physician in attendance on the cholera patients in the Hospital St. Antoine, has administered the sulphate of strychnine to twenty-four cases, fourteen of which were in collapse; of these eleven died, three recovered. M. Herard adds, with regard to the administration of the remedy, that it was given in strict accordance with the rules laid down by M. Abeille, (viz. fifteen milligram. to two or three centigram) and leeches to the base of the thorax.—*Gazette des Hôpitaux.*

*Iodine in Cholera.*—[Dr. Buchanan offers the following observations on the use of iodine in cholera, in the *Glasgow Medical Journal, April*, 1854]:—

During the epidemic of 1848-9, I tried the use of iodine pretty extensively in the treatment of cholera. The result appears to me to have been sufficiently favourable to entitle me, if not to recommend it to you as a remedy, at least to bring it under your notice as worthy of a farther trial. I shall first, however, explain the object I had in view in administering the iodine, as many may think it a substance very unlikely to be of any service; and I shall, perhaps, procure a more patient hearing by showing that there is a rational prospect of some benefit being obtained from it.

We have reason to think that the first of the series of morbid actions that constitute the disease to which we give the name of malignant cholera, consists in the discharge of the watery part of the blood through the exhalant vessels of the gastro-intestinal membrane. In reflecting upon this, I was led to consider whether we could not impregnate the blood deeply with some medicinal substance which might control the tendency of the liquid part of it to run off through the bowels, and, possibly, neutralize any noxious matter with which it might be contaminated, or carry it off through some safer channel. Now, iodine at once suggested itself to me as a substance likely to accomplish the object I had in view, inasmuch as it is known to possess the following physiological properties:—1st, it is readily introduced in large quantity into the blood; 2nd, it is not noxious when so introduced; and 3rd, according to the physiological laws which it observes, it never passes out of the body through the gastro-intestinal mucous membrane.

That iodine, when administered under the form of iodide of starch, or of hydriodic acid, is readily introduced into the blood, to the extent of from 10 to 72 gr. or more, daily, I need not add more evidence to prove, than has been long since laid before the medical public. Neither need I take up time to show, that, when so introduced, iodine is not a noxious substance; and that the affection which has been described by systematic writers, under the name of Iodism, is not the result of the action of the medicine itself, when once introduced into the system, but of the irritant or corrosive local action on the stomach and bowels of injudiciously selected preparations of it. But I may take the liberty of directing attention a little more at large to the physiological law according to which iodine, when it is diffused over the whole body by being held in solution in the blood, invariably passes out of the circulation along with certain secretions; while, with certain other secretions, it is never found to mingle. Iodine, then, is found most abundantly in the urine; but it is found also in the saliva, the mucus of the nose, the tears, the milk, the fluid of hydrocele, and the synovial fluid of the joints; but it is never found in the perspiration from the skin, in the purulent secretion from ulcers, or in the feculent discharge from the bowels. Now, if iodine never passes off through the membrane of the bowels, I entertained the hope that, by impregnating the blood freely with it, I might check the tendency of any noxious matters contained in the blood, or of the liquid part of the blood itself, to pass off in that direction, and might possibly carry them to some other emunctory, where they might be more safely discharged. Such, at least, be it good or bad, was the theory that led me to try iodine as a remedy in cholera.

I gave the iodine to nineteen patients, admitted into the cholera hospital, from Jan. 12th to March 1st, 1849, and in all of them the disease terminated favourably. I also used the iodine in my private practice, and I know it to have been used, to some extent, in the districts around Glasgow, by the gentlemen then engaged in the treatment of cholera, who had learned the use of it at the cholera hospital. From this last source of information, I only learned that the gentlemen who prescribed the medicine thought favourably of it, and that the "black powder" was a popular remedy among the poor people for whom it was prescribed. The cases which I treated in private were all in the diarrheal stage, and none of them went beyond it. Of the cases treated at the cholera hospital, none were cases of mere diarrhœa. They were all deemed sufficiently serious to be sent to the hospital, but they were, at the same time, not the most severe cases admitted; for, to patients far gone in the disease, I purposely directed that the iodine should not be administered, since in them the liquid part of the blood having been already evacuated there is no longer place for the indication to be fulfilled. Of the nineteen cases, seven turned out to be in the bile stage. I did not intend that cases so far advanced should have been so treated, but it was impossible to ascertain how far they had gone till the first evacuation from the bowels was found to contain bile. The remaining twelve cases were admitted in the water stage. The most severe case was one in which, had I been present when it was brought in, I should not have thought of prescribing the iodine. The patient was a female, 24 years of age, admitted 30th January, 1849. She had profuse rice-water evacuations, an imperceptible pulse, cramps, and suppressed urine, followed by a well-marked bile stage; the disease lasting altogether eleven days. The case of a man, admitted January 23rd, might be described in the same words, with the difference, that the pulse was never imperceptible, nor the urine completely suppressed. The remaining cases were of less severity. The only case where iodine was detected in the evacuations from the bowels, was one in which the disease seemed to be intermediate between cholera and dysentery, having commenced like the former, and terminated like the latter. Of this conjunction, I saw more than one example. I may also remark, that dysentery has prevailed in Glasgow since the commencement of the present epidemic, just as happened in 1848-9; while, in 1831-2, there was, so far as I know, no dysentery along with the cholera. The only inconvenience which I observed to result from the iodine was a tympanitic distention of the bowels, which I thought proceeded from it, and which was so great, in one case, as to excite apprehension for the safety of the patient; but it ultimately subsided.

I must not forget to add, that opium was administered in all the cases that seemed to require it, as well as iodine. This was done, because there did not appear to me to be any incompatibility between the two medicines, and because I could not think it justifiable to withhold from my patients, on account of what might turn out to be a mere fancy of mine, a remedy of such approved utility as opium. I should be happy, however, if, in any way, the use of opium could be superseded; for, while I think it by far the best medicine that has yet been tried, I think it also the substance which has added most to the mortality of cholera. As soon as the watery evacuations from the bowels have ceased, and more especially after the bile has begun to be discharged, there is, according to my view, no prescription more certainly deadly than full doses of opium.

I am happy to find the experience of Messrs. Pearse and Marston, at the Newcastle Dispensary, recorded in their recently published statistics of the epidemic cholera of 1853, coincide with my own, as to the effects of opium, and many other points in the treatment of cholera. The only part of their practice which I cannot approve of is, the administration of half a grain of calomel every twenty minutes, or half hour. I admit that it is frequently innoxious, because it is inert, being swept away with the evacuations; but it is, unfortunately, not always so, as will be attested by all who have had opportunities of seeing the fearful tumefaction and disorganization of the rectum, and lower part of the colon, which I so often saw result from the action of this mineral, during the "exploratory epoch" of 1831-2, above adverted to; and I may remark, that the appearances in question could result from no other cause, seeing that they are not of the number of the ordinary pathological alterations witnessed after death from cholera, but were only seen after the use of mercury, or of lead, in poisonous doses. Had the authors above quoted, and all who gave calomel in large or repeated doses, ever been present at such dissections, they would, I believe, hesitate to prescribe such a dangerous substance, for the purpose of bringing on the discharge of bile, which a very ample experience enables me to say comes on of itself, with as much certainty as under the use of mercurials.

The iodine was given in the form of iodide of starch, to the extent of from 1 to 2 drachms, three or four times daily, or from 9 to 16 grs. of iodine in the course of 24 hours. During the present epidemic, I have preferred giving the hydriodic acid in equivalent doses, ( ʒss.—i.), three to four times daily, as it has probably a local astringent power, in addition to its more general operation. If at all discoloured, as it readily becomes when some time kept, it ought to be given in a solution of starch.

I subjoin the formulæ for preparing the iodide of starch and the hydriodic acid.

*Iodidum Amyli.*—℞ Iodinii, gr. xxiv.; amyli, ʒi.; aquæ pauxillum. Tere simul donec colorem cœruleum induant.

*Acidum Hydriodicum Liquidum.*—℞ Iodidi potassii, gr. cccxxx.; acidi tartarici, gr. cclxiv. Solve seorsim in aquæ ℥i.ss., misce et cola. Colato adde aquæ quantum sufficiat, ut sint totius liquoris, ʒl. (℥vi. ʒii.)

The iodide of starch contains a grain of iodine in each scruple. The hydriodic acid contains five grains of iodine in each drachm, or a grain in 12 minims.

### *Treatment by Sulphuric Acid by* Doctor Lepetit *of Poitiers.*

This method consists in placing the patient in a hot saline bath, and administering dilute sulphuric acid by the mouth, in a mixture of ʒv. dilute sulphuric acid to ℥viii. of water. The constant effect of this treatment, according to M. Lepetit, is the immediate and complete checking of the vomiting and purging. We have received from two correspondents observations in support of the good effects resulting from this mode of treatment. A month since M. Guilhaud wrote, "I have had occasion to treat thirty cases of Asiatic cholera, and in all where I employed the sulphuric acid there followed an almost immediate cessation of the diarrhœa and vomiting."

The sulphuric acid was administered with syrup in doses of a teaspoonful every half hour. —*Gazette des Hôpitaux.*

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## SUMMARY.

*Ovariotomy, with Reference to its Introduction into Legitimate Practice.* By Mr. G. B. Childs, (read before the Medical Society of London).—Since the end of the last and the commencement of the present century—the era marked by the labours of Hunter and Baillie—the numerous diseases classed under the vague term of female complaints have received much attention, and have been better understood, principally through the more frequent employment of improved philosophical instruments, and also through more minute and extended inquiries into the phenomena of disease. In these investigations the diseases of the ovaries seem to have attracted the notice of British earlier than of Continental medical men. Three operations had been proposed for ovarian diseases—viz., puncture, excision, and extirpation. The operation of puncture was scarcely better than leaving the patient without any treatment, for the records of one hundred and seventy cases, collected by Dr. Robert Lee, proved that the disease seldom remains quiescent under no treatment, while it is seldom cured and scarcely ever relieved by tapping. The author would not, however, follow the opinion of those who ascribed death to this operation, for the fatal result could no more be attributed to it in this case than in ascites. The operation of excision, as well as those by injection and the seton, were shown to have arisen from the discovery that so-called ovarian diseases were often accompanied with hydatids or cysts, by steatomatous or sarcomatous growths, and that sometimes even malignant growths were present. Le Dran endeavoured to destroy the morbid cyst by injection and wadding; Chopart and Desault opened the sac or sacs with caustic; Dzondi laid open the sac and attempted to remove it by forceps; and at last De la Porte and Morand proposed extirpation, which was performed by L'Aumorier in 1782. Mr. Childs then noticed the operation of Mr. I. B. Brown, and referred to the complications often discovered during the operation for excision. Proceeding then to speak of ovariotomy, he disapproved of the usual practice of delaying the operation, alleging that delay can produce no benefit to the patient, and that it will be attended with greater probability of the formation of adhesions. The errors in diagnosis which have been sometimes committed form no argument against the operation. It was a remarkable fact that sterility was a very common accompaniment of ovarian disease; but it was also true that ovarian tumours were sometimes found in women who had borne several children. The author adduced a short analysis of the cases of ovariotomy collected by Dr. R. Lee, from which it appeared that—1. The abdomen was laid open in eight cases, in which no disease was found; of these two died. 2. The abdomen was opened in fifty-four cases, in which the diseased mass could not be removed; of these there died eighteen. 3. The diseased ovary was removed in one hundred patients, of whom thirty-eight died. The mortality was not to be considered large, when it is remembered how common it is to delay the operation. In many of the fatal cases, and of those in which the operation could not be performed, it would be easy to show that delay had been the principal cause of the failure or of the fatal result. Hence the author concluded that to abandon ovariotomy in all or even in most cases would neither contribute to the interests of humanity nor to the honour of surgery. The author concluded his paper with the narrative of two cases in which he had performed the operation. The first was successful; in the second, the patient died of diarrhœa.

*Treatment of Ovarian Dropsy, by Injections of Iodine into the Cysts.*—Professor Simpson read the following paper before the Edinburgh Obstetrical Society:—

It has been often proposed to treat dropsy of the ovary upon the same principles as hydrocele or dropsy of the tunica vaginalis. In accordance with this view, Drs. Hamilton, Scudamore, and others, have in former times injected ovarian cysts with irritating solutions of sulphate of zinc, &c.; but the results have in general proved so unfortunate and disastrous as to prevent a repetition of the practice.

In 1832, Mr. Martin first recommended the use of tincture of iodine as the surest and safest injection for the cure of hydrocele; and this drug seems now almost universally adopted by surgeons in the obliterative treatment of this variety of local dropsy in the male subject.

Latterly, various surgeons, particularly Velpeau, Bonnet, Belluerimi, &c., have extended the practice of iodine injections to the treatment of other local dropsies and cysts; to chronic abscesses; diseases of the joints, &c. And the past experience of surgeons on the subject would certainly seem to show that while the local and direct application of iodine to morbid secreting surfaces has a great power of modifying, altering, and arresting even the secretory action of these surfaces, and often changes suppurative into adhesive inflammation, it shows at the same time wonderfully little aptitude to excite any excess of local irritation and pain. Hence naturally arose the question whether it could be safely and successfully injected into such large cysts as those of the common form of dropsical ovary.

In 1846, Dr. Alison, of Indiana, recorded the history of a chronic case of ovarian dropsy that had been repeatedly tapped, and which he injected at last with a solution of iodine. Severe symptoms followed, but the ultimate result seems to have been favourable. In 1851, Dr. Simpson assisted Mr. Syme in injecting a cyst in the neighbourhood of the ovaries, but not a common cystic form ovary. The symptoms which ensued were those of considerable excitement; but the original cyst apparently became obliterated. Another one in its vicinity has lately shown itself in this patient.

Within the last year, Dr. Simpson has, subsequently to tapping, injected into dropsical ovarian cysts the tincture of iodine in seven or eight cases. For this purpose he has employed the common tincture of iodine of the Edinburgh Pharmacopœia, undiluted. He has usually thrown into the cyst two or three ounces of the tincture. In some cases he has allowed a portion of the injected fluid to re-escape; in others he has retained the whole of it in the sac of the cyst that was tapped. From these cases he drew the following conclusions:—

1. In none of the cases of ovarian dropsy treated with iodine injections after tapping has he yet seen any considerable amount of local pain follow the injection, with one exception; in most instances no pain at all is felt; and in none has constitutional irritation or fever ensued. In the one exceptional case considerable local irritation followed, and the pulse rose to 110; but the same phenomena occurred in the same patient after previous tappings without iodine being used.

2. While the practice seems thus so far perfectly safe in itself, it has by no means proved always as successful as in hydrocele in preventing a reaccumulation of the dropsical fluid; for in several instances the effusion into the sac seems to have gone on as rapidly as after a simple tapping without iodine injection.

3. But in two or three of the cases, the iodine injection appears to have quite arrested, for the time being, the progress of the disease, and to have produced obliteration of the tapped cyst, as there is no sign whatever of any reaccumulation, though several months have now elapsed since the date of the operation.

Lastly. Accumulated experience will be required to point out more precisely the special varieties of ovarian dropsy most likely to benefit from iodine injections, the proper times of operating, the quantities of the tincture to be injected, and other correlative points. Perhaps the want of success in some cases has arisen from an insufficient quantity of iodine being used, and from the whole interior of the cyst not being touched by it. The greatest advantage would of course be expected from it in the rare form of unilocular ovarian cysts. In the common compound cyst the largest or most preponderating cyst is usually alone opened in paracentesis: and though it were obliterated, it would not necessarily prevent some of the other smaller cysts from afterwards enlarging and developing into the usual aggravated form of the disease.—*Monthly Journ. Med. Sci.*, May, 1854.

*Ovariotomy, performed by* W. Lyon, Esq.—Mary D——, aged 31, a worker in a factory, and unmarried, was admitted into the Glasgow Infirmary on the 18th of March, 1850.

About two years previous to admission, patient observed some swelling of the abdomen, for which she could assign no cause; she is not sensible that it arose first on either side. It slowly increased in size, and about a year after its first appearance, she was treated for her complaint in the medical wards of the Infirmary, but without any appreciable benefit. Hitherto she had not experienced any disagreeable symptom, except inconvenience from the size of the tumour.

Shortly after her dismissal from hospital, she began to suffer severe pain in the situation of the swelling, which at that time was not of so great size as to produce much constitutional disturbance. She states that the pain was at once relieved by tapping, which was performed four months after her dismissal from hospital, or about sixteen months from the commencement of her complaint. A large quantity of brown-coloured oily-looking fluid was evacuated. The swelling, however, soon began to re-appear, and increased in about five months to as great a size as it had formerly attained. At the expiration of this period, or about three months previous to admission, she was tapped a second time.

On admission the fluid is found to have re-accumulated, and patient states that the swelling of the abdomen is now as great as it was before she was tapped. Fluctuation is distinct all over abdomen, and percussion dull. In right iliac fossa, a large, round, moveable, and elastic tumour can be distinctly felt; fluctuation is also perceptible in it, although it is much less distinct than in other parts of the abdomen. As felt, *per vaginam*, the tumour is very easily moved, and is smooth and elastic to the touch. She has not much dyspnœa, neither has she any pain or derangement of the functions of the abdominal viscera. She has menstruated quite regularly for many years. She complains, however, of some cough with which she has been troubled for some time past. Percussion of chest normally clear. Respiratory murmur harsh, and accompanied in several situations by loud sonorous ronchi. Her general health has for some time past been indifferent; she is in person rather thin, but her aspect is good and cheerful.

March 20.—Was shown to-day to a consultation; the majority of the members of which were of opinion that *paracentesis abdominis* should be performed, and the fluid withdrawn, in order that a more accurate diagnosis of the nature and connexions of the tumour might be made. This was accordingly done, and about a gallon and a-half imperial of a viscid, straw-coloured, oily-looking fluid was removed. It was highly albuminous, and had a specific gravity of 1·014.

The abdominal parietes were, as might be expected, a good deal collapsed after the evacuation of the fluid, and the tumour, which before the tapping was felt situated in right iliac fossa, was now deeper in the pelvic cavity, but perfectly moveable, and could, owing to the relaxed state of the abdomen, be almost insulated by the fingers inserted under it.

The consultation was now of opinion that this was a favourable case for operative interference, and decided that the tumour should be extirpated by one of the usual operations, allowing, however, a few days to elapse to see whether or not the fluid should reaccumulate. The circumference of abdomen before tapping was 34 inches! after tapping 28 inches.

Patient, at her own desire, left the hospital for a short time after being tapped, and was visited regularly as an out-patient. A week after leaving, she began to suffer a good deal of pain in the abdomen in the situation of the tumour, and as the swelling was obviously increasing, she was advised to return to the hospital, which she did.

April 5.—The fluid has, rapidly reaccumulated since the tapping, and for the last eight or ten days she has complained of considerable pain in the abdomen, and has had occasional fits of retching. These symptoms have been relieved by the administration of opiates and prussic acid.

At her own request, and after the importance as well as the danger of the operation had been fully explained to her, the tumour was skilfully extirpated to-day by Mr. Lyon, assisted by Drs. M. S. Buchanan, Lawrie, Weir, &c. At 2 P. M. she was comfortably laid upon a table, in a large and airy room, the temperature of which was raised to 70° Fahr. Having been put under the influence of chloroform, an incision three inches in length was made in the *linea alba* from the umbilicus downwards. When the tumour was exposed, several small cysts were punctured, and their contents allowed to escape. It was then found to be adherent, to a slight extent, above and around the umbilicus. The largest cyst, which filled and distended the abdominal cavity, was now punctured, and a great quantity of sero-purulent matter was discharged. In conquence of the evacuation of the contents of the cyst, and the external opening having been somewhat enlarged, the adhesions to the peritoneum lining the anterior wall of the abdomen were reached with the finger, and separated, though with difficulty. The whole of the sac was then easily drawn out of the abdomen; two short ligatures were tied firmly around the pedicle, which was about an inch in breadth and half an inch in thickness; it was then cut a little above the ligatures and the sac removed. A sponge was used gently for the purpose of removing a small quantity of the contents of the large cyst which had escaped into the abdominal cavity. The wound was closed by three or four stitches, and by straps of adhesive plaster, after which a light compress was applied over it, and a broad bandage put round the abdomen. *To have immediately a small starch enema with two drachms of laudanum.* At 11 P. M. it is reported that patient has been asleep since the operation, and she now expresses herself to be quite comfortable and free from pain. Pulse 98; fair strength. *The anodyne enema to be repeated.*

April 6, 6 A. M.—Has passed on the whole a good night, though occasionally disturbed by cough. Pulse 114, soft, and of good strength; tongue moist; respiration normal. Is still quite free from pain.

11 A. M.—Is somewhat drowsy. Complains only of weakness. Pulse 120, soft. *To have two teaspoonfuls of wine every half-hour.*

2 P. M.—Much the same as at last report. Pulse rather weaker. Pupils slightly contracted. *To have half an ounce of whiskey every half-hour.*

4 P. M.—Patient is now evidently sinking; respiration laborious; extremities cold; pulse almost imperceptible. Death at 7 P. M.

*Inspection of the body thirty hours after death.*—The edges of the incision in the abdominal parietes were slightly adherent in consequence of the effusion of a small portion of lymph. About six ounces of sero-sanguinolent fluid, mixed with a little pus, were found in the abominal cavity. The small intestines were slightly glued together by recent effusion of lymph, and presented on their peritoneal surface numerous congested patches. The omentum was likewise adherent to the intestines, and to the peritoneum lining the anterior wall of abdomen. All around the umbilicus, the peritoneum had a congested and ecchymosed appearance, and in some situations slight laceration of the peritoneum and effusion of blood were observed. The uterus and left ovary were quite healthy. Other organs not examined.

The tumour at first sight seemed to furnish examples both of the multilocular and unilocular varieties of ovarian dropsy; but, on more minute inspection, it was seen to consist of a large unilocular cyst, with a cluster of smaller cysts springing from its anterior, a little beyond its origin from the pedicle, and covered by its lining membrane. This aggregation of cysts formed a globular mass of considerable size, and was evidently that which had been felt during life in right iliac fossa, both before and after patient had been tapped. The unilocular cyst was so large, that when filled with fluid, it would cause very considerable distention of the abdomen. Its lining membrane was highly vascular in some situations, but was, for the most part, coated with recent lymph. It contained, as has been already mentioned, a large quantity of sero-purulent matter, the greater part of which had to be evacuated before the sac could be drawn out of the abdomen. The thick pedicle of the tumour had its origin in the broad ligament of the right side.—*Glasgow Medical Journal*, 1853.

*Case of Extra-Uterine Pregnancy.* By James Will, M.D.—Mrs. S., æt. 39, of a thin, spare habit. In the year 1844, soon after her marriage, she became pregnant for the first time, experiencing all the usual symptoms; the morning sickness began at an early period, and was severe for two months. About this time she suffered from an inflammatory attack in the abdomen, which confined her to bed for six weeks; she, however, gradually recovered, but was never altogether free from uneasiness in the bowels. The breasts were full and contained milk, and the abdomen gradually enlarged until it attained its usual size in the ninth month. Her medical attendant, who had ample opportunities of ascertaining her condition, never doubted the existence of pregnancy; his only surprise was that she did not abort at the beginning or during the continuance of the inflammatory attack. At the expected time labour pains came on with such frequency and severity that the accoucheur was induced to hazard an opinion that the case would soon terminate. The pains, however, gradually became less frequent, and finally ceased, together with the movement of the child. A discharge took place from the vagina of bloody mucus, and for some time after she continued to complain of pain in the hypogastrium, particularly on making water. The size of the abdomen diminished, and her health was completely re-established, every organ performing its proper functions. Becoming pregnant again in 1850, I was requested to attend her in her confinement in the beginning of the year, and on the 2nd January, 1851, she was delivered of a healthy female child, the labour being in every respect natural, and the recovery quite satisfactory. I was now made acquainted with her previous history, which led me to make a careful examination. The only unusual appearance presented was the existence on the left side and approaching towards the mesial line of a tumour of the size and shape of the head of a full grown fœtus; it was hard, partly moveable, but gave no pain or uneasiness. After her delivery she seems to have enjoyed perfectly good health, but I saw little of her till she called to engage my attendance in her next confinement. This took place on the 12th February last, and on my arrival I found that she had been in labour for some hours, and that the os uteri was dilated, and the membranes protruding, and in little more than an hour she gave birth to a healthy male child. On placing my hand on the abdomen, I found that I could insinuate it between its contracting fundus and the tumour, so that there could have been little or no connexion between them. For two days she had not an untoward symptom, but on the third she had a rigor, and complained of acute pain and tenderness across the belly, particularly in the situation of the tumour; the pulse was frequent and hard; skin hot; tongue dry and coated; bowels obstinately confined. All the usual remedies were had recourse to, and for a time with marked benefit, but a hectic state coming on, accompanied by a diarrhœa, she gradually sunk and died on the 9th May. During the whole course of her illness she had occasionally recurrences of abdominal pain and vomiting of a green bilious matter, which seemed to give her relief. Dr. Dyce, Lecturer on Midwifery in the Marischal College, who had seen the patient with me in April, was present at the inspection, which took place fifty hours after death. On external examination the abdomen felt as if it contained both liquid and gaseous matter. A solid, hard, nodulated and circumscribed tumour was felt occupying the umbilical, and extending into all the adjacent regions. The skin over the tumour was whiter than the rest. On opening the abdomen a quantity of gas of intolerable fœtor escaped, and on freely dividing the abdominal parietes, a mature fœtus, of a yellowish white colour, was brought into view, occupying the greater part of the space between the ensiform cartilage and the pubis. It lay with his head upwards, and its back towards the right side of the mother. It was lifted out *en masse* without resistance, as it was lying unattached in a cyst which adhered so closely to the abdominal parietes as to be cut open along with them. The deep surface of the cyst had very extensive attachments to the viscera, by which it was glued down to the vertebral column; its internal surface was of a dark colour, and contained fæces which had escaped from the bowels by three openings; but neither placenta nor membranes could be detected. The uterus lay immediately below the cyst, but had no connexion with it, and was in all respects normal, as well as the Fallopian tubes and right ovary, but the left ovary was not recognized.—*Monthly Journal of Med. Science, August*, 1854.

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## Remarks on the Nature and Causes of Green Vomiting, and on Allied Pathological Changes.

### BY DR. FRAZER,

LECTURER ON BOTANY TO THE CARMICHAEL SCHOOL OF MEDICINE.

From its frequent occurrence in disease, and also from the peculiar and striking grass-green hue that it often assumes, the form of vomiting to which I am desirous of directing attention is more or less familiarly known by every practising physician, and has attracted the notice of many observers, since we find it constantly alluded to under various appellations in medical writings; yet, I think, I may safely assert, that the ideas in general entertained respecting its nature are either obscure and undecided, or contain much erroneous supposition with reference to both its source and real value as a symptom of disease; nor can the following remarks upon the subject be regarded as embracing fully the entire range of this inquiry, if I am correct in my researches and views about its extensive and important bearings, though they may serve to advance, in some degree, our knowledge of it, and to direct further attention to this highly interesting pathological condition.

The ejection of green-coloured fluids from the stomach is noticed in the course of many abdominal diseases; thus we meet it during attacks of peritonitis, puerperal fevers, and continued fevers with gastric complications, in strangulation, in intus-susception of the bowels, in that rare affection, acute gastritis, and in various enteric inflammations. Its appearance has been attributed by many to the presence of bile in the secretions evacuated during protracted vomiting, and we often find it described as consisting of *green bilious matter*. For various reasons, which I will detail, this explanation did not appear at all satisfactory to me, and I have been led, from repeated attentive consideration of the subject, to form very different conclusions as to the nature of this morbid evacuation. I shall, therefore, briefly relate a few instances in which I recently noticed its occurrence, and afterwards endeavour to state the views I entertain regarding it.

Case No. 1.—A man in Professor Banks' ward in the Hardwicke Hospital, ill of fever, accompanied with considerable gastric tenderness and debility, discharged from his stomach, for some days, quantities of this peculiar green matter; when carefully examined, it was found to consist of small, green masses floating in a less highly coloured fluid; no bile could be detected in it by tests. Within a few days, under treatment, the vomiting ceased and he recovered.

Case No. 2.—A female patient of Doctor M'Dowel's, in the Whitworth Hospital, suffering from an enlarged spleen, which was fully the bulk of a uterus at the sixth month of pregnancy, and whose blood, examined by the microscope, presented all the characters described by Dr. Bennett of Edinburgh, as constituting leucocythæmia, shewing a great increase of the colourless or white corpuscules when compared with its state in health. While under observation, she emaciated rapidly, her appetite failed, and on September 4th she was attacked with diarrhœa, and vomiting of grass-green fluid in abundance. On the 6th she was much worse, her pulse weak, her skin cold, the vomiting unchanged in character, and she was evidently dying from exhaustion. Next day, instead of the green matter, she threw up above a pint of pure blood, of a blackish hue; she was removed from hospital the same evening, and died soon after.

Case No. 3.—A female, ill for some days of ordinary continued fever; she complained of pain in the epigastrium, and was attacked with vomiting; at first she ejected a fluid, tinged uniformly with bile, of a yellowish-brown colour, which afterwards became mixed with small dark green clots, until the appearance of the matter that was discharged resembled chopped spinach in water; this continued for three days, being attended with considerable general debility, but was gradually relieved under treatment; the green-coloured matter first disappearing, the vomiting fluids once more consisting of diluted bile, and finally altogether ceasing. Even when she was throwing up the green matter, it was easy to perceive that the fluid contained bile also, in notable quantity dissolved in it.

This list of cases, in which I have noticed and examined green discharges from the stomach might be greatly extended, yet, perhaps, without tending to any useful results, the above being quite sufficient to serve as examples of it, and the evacuation itself is so commonly met in practice, that it must be familiar to every one. That the striking green colour is not due to the presence of bile will, I think, be readily allowed, still it is better to offer some proofs on this point; and first I would remark that the appearance of bile is very different from the peculiar grassy or verdigris tint of the evacuation at present under our notice, its proper hue being a peculiar brownish yellow tinge, similar to the well known discoloration of the skin in jaundice, or when it is concentrated, what painters term bistre. It is true that a green biliary matter is described in works on animal chemistry or physiology, termed by its discoverer, Berzelius, biliverdin, still this is evidently not the natural bile, but a product of its metamorphosis out of the body, under the action of chemical re-agents. Secondly, we have the fact that, in some instances, the presence of the bile can be easily perceived, dissolved in the same fluid that contains the green matter; and again, the occasional absence of any bile, either as it can be recognized by the taste or with the tests of chemistry, brings us to the conclusion that they are not identical in their nature.

I consider this green matter is composed of the blood in an altered and modified condition, the discharge being altogether of a hæmorrhagic character. Repeated microscopic observations, in those instances in which I have noticed its occurrence for some time past, has confirmed my ideas regarding its nature, and examination shows that the little fragments of which it consists are various sized clots, containing abundance of blood globules: this alone might decide the inquiry, however I am desirous of placing it on other grounds, in addition to such as are afforded by the microscope. I may, therefore, bring forward the following arguments which further support the view I have taken. 1st. The form of vomiting alluded to occurs in diseases where there is much congestion, and often inflammatory engorgement of the vessels of the stomach or intestines, as in gastritis, and fevers with gastric complications; and after death we find patches of softening in the mucous membrane, or decided marks of excessive vascularity; at least such has been the case in those fatal instances where I have had the opportunity of inspecting the stomach. 2ndly. The coincidence of vomiting of ordinary blood, in addition to the green matter, which sometimes occurs, and as was noticed, for example, in the case of the woman with enlarged spleen already alluded to; besides, I have remarked, that in many cases of fever which were attended with this peculiar green discharge, hæmorrhagic purpuric eruptions were frequently seen. 3rdly. We have the physical properties of this substance; it forms small green clots in the fluid, in addition to tinging it with its peculiar hue, as we might expect blood to do. 4thly. We must consider that a similar green colour occurs in various parts of the body, and under very dissimilar circumstances. This is, perhaps, the most interesting branch of our subject, and one on which medical records afford little information; as instances of this change we have, among other examples,

The peculiar green hue of contusions that are of some standing, and the green colour of the ecchymoses that occur on the extremities in land scurvy, many cases of which were noticed in the hospitals in the late years of famine.

The colour of the great intestine in various cases of fatal dysentery, and of the mucous tissue of the stomach in inflammatory gastric affections.

The grass green appearance of the interior of the bladder, and of the kidneys after death, in many acute or sub-acute diseases.

The well-known greenish tinge often seen in moist gangrenous affections.

The colour of the body as it begins to decay after death.

The green hue of coagulable lymph, and of purulent exudations in bad constitutions, and many other similar facts in pathology that might be enumerated, which are as yet unexplained.

If we reject all extraneous considerations from the foregoing class of morbid changes, we have, I conceive, one uniform fact in them all, namely, the presence of blood undergoing some of its mysterious changes; what these are will require additional investigation; but I think we may conclude, that the death of the blood is essential—that having lost that vital attraction for oxygen which distinguishes it, and acted on by extraneous sources (probably deoxodizing ones during decay), it becomes changed in its hue.

With regard to its practical bearings, there is much importance in the view now brought forward; it cannot be regarded as a mere theoretic matter, and, therefore, of secondary value, for those green discharges being recognized as hæmorrhagic, will go far to account for the collapse, cold extremities, failing circulation, and other alarming symptoms that attend its presence when ejected in any quantity; and with reference to *treatment*, which is the ultimate aim of medical knowledge, we have a rational explanation of the benefit that kreasote, ice, and other well-known styptics exert in checking it.

In concluding for the present this brief notice of a most interesting point in pathology and practical medicine, I may state, that I hope before long to be enabled to detail still further facts bearing on the subject.

---

## BIBLIOGRAPHY.

### *Lettsomian Lectures on Insanity.* By Forbes Winslow, M. D., D. C. L., &c.

The three Lectures which are now presented to the Profession by Dr. Winslow were delivered before the President, Council, and Fellows, of the Medical Society of London, and are stated by the author to form but a "mere outline of the subjects which it has been his object to elucidate." The first lecture is devoted to the consideration of a subject replete with interest, viz.: "The Physiological Vocation of the Physician."

Dr. Winslow commences by insisting on the necessity of an accurate acquaintance with the science of mind; and he then proceeds to consider the physician in his spiritual character as having in his power a "*medicina mentis*," as well as a *medicina corporis*. The importance of a knowledge of the influence of the mind on matter, of the part played by moral causes in the production of disease, and again, in the alleviation, and even in the cure of a numerous class of maladies, is well known to the philosophic cultivator of the healing art.

The power which moral causes exercise in predisposing the body to the reception of disease; and again, the power they possess of warding it off, is recognized in numerous instances, but more especially during the prevalence of epidemics. Here we may remark that, with advantage, a leaf may be taken out of the book of the ancients; and the deep thinker will, we apprehend, fully agree with Dr. Winslow that "the psychological effect of their superstitious proceedings was to allay public apprehension, and to excite hope and confidence."

The remarks of our author on the subject of the training and education of those who intend to give up all or a portion of their time to the treatment of the insane are worthy of close attention.

We are of opinion that Dr. Winslow deserves much praise for the manner in which he treats this part of his subject. It would appear that, in the opinion not alone of the public, but of those who might be supposed to know better, the physician may treat successfully a class of patients with whose disease he must be totally unacquainted. The candidate for medical degrees must produce evidence of at least having *enjoyed* the *opportunities* of becoming conversant with corporeal disease in all its varied forms; but the maladies of the mind are not considered worthy of even a passing notice.

We confidently affirm that ignorance on the subject of mental alienation prevails amongst the greater number of those who are, so to speak, "qualified" to commence practice, and that the education of those who propose to employ themselves exclusively in the treatment of the insane is often lamentably deficient.

Dr. Winslow truly remarks, "A knowledge of the most intricate, complicated, and subtle phenomena with which we have to deal, namely, the faculties of the human mind, is considered to come by intuition, no preparatory psychological education being deemed necessary." The comparative neglect on the subject of mental disease, which so remarkably prevailed amongst physicians, may be traced to the fact that a certain amount of degradation, as it were, appertained to the so called "Mad Doctor;" and formerly his position amongst men of his own profession was a very equivocal one. We trust, however, that, in the words of Dr. Winslow, "the day is not very remote when the psychological physician will take his proper and legitimate position in the ranks of honourable and scientific men."

The second of the Lettsomian Lectures has strong claims on the attention of all who engage in the study of the "mind diseased," being devoted to the important subject, "The Medical Treatment of Insanity."

On the threshold of the inquiry, Dr. Winslow disclaims the possession of any exclusive or "specific" plans in the treatment of mental disease, any mode of medical management leading uniformly to the desired result. He is not in possession, he frankly admits, of an elixir or drug that will

> "Purge the mind of its thick coming fancies."

Before entering on the treatment of insanity, Dr. Winslow speaks of the neglect of the employment of therapeutic means which has prevailed, and this he attributes to the doctrines taught by many writers on mental derangement, and which were well calculated to throw discredit upon all remedial measures which are merely physical. The supposition that insanity is a *spiritual* disease, doubtless, lent support to these doctrines. After an analysis of ten thousand cases of insanity, culled from various sources, Dr. Winslow states, that he is "amazed that there ever should have been a shadow of doubt as to the physical origin of insanity."

Dr. Winslow's views as to the value of *early* treatment accord with our own experience, and, we believe, with that of all men who have made accurate observations on the subject. "I have no hesitation in affirming, that, if brought within the sphere of medical treatment in the earlier stages, or even within a few months of the attack, insanity, unless the result of severe physical injury to the head, or connected with a peculiar conformation of chest and cranium, and an hereditary diathesis, *is as easily curable as any other form of bodily disease, for the treatment of which we apply the resources of our art.*" We cannot but record, in all humility, our dissent from this proposition; our experience teaches us, that this statement, as to the curability of mental disease, compared with corporeal, is far too sweeping.

Dr. Winslow gives most excellent directions for the guidance of the medical examiner, in his preliminary inquiries in the case of insanity, and alludes to the important fact, that particular delusions have often an actual physical origin. He then goes into a consideration of the *prognosis*, and here the psychological student may derive much information on a point upon which his opinion will often be looked for with intense anxiety. We can only glance at the salient points in our review of these lectures. With regard to the influence of age upon the prospects of recovery, admitting, to the utmost, that the early age of the patient is highly favourable, we believe that the opinion of the hopelessness of recovery in those of advanced years is too generally entertained. Our author says: "I have seen patients, after the advanced age of sixty and seventy, recover." We can add our testimony in support of this statement. We lately attended a clergyman of seventy-five years of age, who *suddenly*, and for the *first* time, became deranged. He laboured under the impression that he had committed crimes, the very recital of which were shocking, and at times he was violent.

Here, then, was a case presenting a most unfavourable prospect from its nature, yet he, nevertheless, after the lapse of a few weeks, was restored to perfect mental health, which he retained during his life. We could adduce some remarkable cases which occurred in the practice of a friend, in which insanity presented itself at a still more advanced period of life, and which passed away completely.

As to the utter incurability of a case associated with epilepsy, Dr. Winslow differs from Esquirol. The latter is of opinion, that epilepsy, when associated with insanity, places the patient beyond all prospect of cure. Dr. W. has seen such cases recover, admitting, of course, that "they constitute a difficult class to manage."

He believes the "petit-mal" is more injurious in its effects than the other forms of epilepsy.

The treatment of acute mania is first discussed, and the oft-disputed practice of blood-letting dwelt upon. Dr. W. reprobates the disciples of indiscriminate blood-letting, and also those who shrink with horror from detracting a drop of blood even locally. We give our adhesion to all he says as to local bleeding in the hands of "the discreet and judicious practitioner," but we protest against even the "*one*" general bleeding which he sanctions. We are firmly convinced, that in very—very few cases will it be found necessary in *any* disease, and an experience derived from most extended observations has long led us to this conclusion.

The practice of "prolonged hot baths," a current of cold water being poured over the head, as recommended by Dr. Brierre de Boismont of Paris, Dr. Winslow informs us "will be found of the most essential service."

We have no experience of the effect of hot baths, the duration of which was "from eight or ten to fifteen hours," cold water being *continually* poured on the head, but we have seen much benefit arise from a hot bath of an hour's duration, cool water being poured on the head. We would caution the practitioner against pouring *cold* water *continually* on the head for a much shorter period than *even eight hours.*

Dr. Winslow makes some judicious remarks on the use of cathartics, and we may add on the *abuse;* also upon the "continuous and persevering administration of sedatives." He is in the habit of administering sedatives and tonics in combination, Conium with Iron, Opium with Quinine.

In paroxysmal and convulsive forms of insanity, he has derived advantage from the tincture of Sambul. We specially commend to the consideration of *economical* Governors of Hospitals for the Insane, the following remarks, coming from so high an authority:—"It is rarely necessary, in the treatment of insanity, to deprive the patient of animal food. Among paupers, insanity is frequently cured by the free use of good animal food and a generous supply of porter."

Dr. Winslow's third Lecture is on "Medico-Legal Evidence in Cases of Insanity," his object being "to submit a sketch of our high and responsible vocation as medico-legal witnesses." For the present we cannot find space for a brief notice of this highly important lecture, the subject of which is of paramount interest to every member of our Profession.

The last Number of the Dublin Quarterly Journal of Medical Science contains an admirable paper on "Unsoundness of Mind in its Medical and Legal Considerations," from the pen of our learned friend Dr. J. W. Williams, which we strongly recommend to the zealous student of psychological medicine. Gladly would we transfer to our pages, if space permitted, some of the remarks on this subject, from the lecture of Dr. Winslow, and the paper of Dr. Williams. We may on a future occasion take up the subject.

In coming to a conclusion of this very imperfect notice of the Lettsomian Lectures, we must say our task has been a pleasing one, inasmuch as we can vouchsafe to the author our unqualified praise. Dr Winslow presents a combination which we regret to state is too rare in our "learned Profession," namely, the accomplished scholar and the practical physician.

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## EXTRACTS FROM BRITISH AND FOREIGN JOURNALS.

### Therapeutics of Cholera—*Continued.*

### *Report of the Medical Council of the Board of Health on the Value of the Castor Oil Treatment.*

We publish the following *resumé* of this Report:—

"It appears that in eighty-nine cases of cholera, treated by fourteen different practitioners with castor oil, on the plan recommended by Dr. Johnson, sixty-eight were fatal, recovery having occurred only in fifteen cases, while the six remaining cases are still under treatment. The above Report having been laid before the Council, and approved by them, it was resolved that the same be communicated to the President of the General Board of Health.

"J. A. Paris,
"B. G. Babington,
"A. Tweedie,
"W. Baly,
"N. B. Ward."

### *Extracts from Observations on Cholera, by* Robert Boyd, M. D., *Fellow of the Royal College of Physicians, London, Physician to the Somersetshire Lunatic Asylum.*

*Pathology.*—In the reports of the morbid appearances from the Medical Boards of the three Presidencies of India, Dr. Bisset Hawkins's account of cholera in Moscow, M. Rayer from France, and Dr. Brown from Sunderland, where cholera first appeared in England; Dr. Benson states: "You find nothing to account for death, no lesion of sufficient importance to give rise to the symptoms, or to cause the fatal result. In fact, there is venous congestion of all the internal organs, and nothing more, not even inflammation. I believe there was no additional light thrown on the subject by Dublin anatomists."

Professor Hart, a profound and accurate anatomist, says: "Of those who died in the state of collapse, the cerebral organs and spinal chord presented no marked morbid appearances; in some cases the vessels over the hemispheres of the brain were congested; the heart was contracted in most cases; nothing peculiar respecting the lungs; the stomach and intestines presented a remarkable pinkish colour, and their veins were greatly congested; the Peyerian glands were generally distinct; no fæces in any part of the intestinal canal, which contained a white fluid like thin gruel; the surface of the mucous membrane throughout was covered with a tenacious pulpy substance of the consistence of starch mucilage; the liver was generally small in size; the gall-bladder distended with dark green bile; the spleen was usually small and corrugated; the kidneys were firm; no urine in the bladder. I carefully dissected the semilunar ganglion in several cases, but could never discover any morbid change in it. The muscles were always rigid. Of those few I had an opportunity of examining, who died in the febrile state, the greater part had signs of inflammation of the intestinal mucous membrane, and in some there was softening of the lining of the stomach to such an extent, that it hung in shreds into the organ." Dupuytren found the glands of Brunner and of Peyer always enlarged in cholera, and believed that they were the chief seat of the disease. Delpech found the semilunar ganglions voluminous, red, injected with blood, and infiltrated with serum; he found the nerves of the solar plexus swollen, and their neurilemma injected; and the lower part of the par vagum similarly changed; and Loder of Moscow predicted these changes from a consideration of the symptoms. None of these changes were observed in this country.

In most cases the blood became thick and pitchy looking, even in the arteries it was dark.

Dr. O'Shaughnessy showed that cholera blood had less water than healthy; that the serum had more albumen, but was very deficient in salts; that it separated imperfectly from the crassamentum, and was of high specific gravity. The fæces contained the salts which the blood lost.

The change in the blood was very remarkable. and generally supposed to be communicated through the nervous system. The first outbreak of the disease was so sudden, so violent, and so unlike any other disease, that the symptoms in every country were supposed to be the result of poisoning; and many a medical man had a narrow escape from the enraged populace for his imagined participation in the crime. "The disease *was* occasioned by a poison, but the poison was *not* administered by man."

*Treatment.*—With respect to the treatment of cholera, Dr. Benson observes, "that the first cases in any place could scarcely be cured by any treatment, whilst those which occurred at a later period were by no means unmanageable." This fact might be accounted for in various ways: "First remedies generally failed, and after remedies generally triumphed, so that they multiplied exceedingly."

The treatment adopted in India, as described by Mr. Annesley, was large doses of calomel and opium, bleeding from a vein, if it could be performed, leeching and friction, &c., as already described in the Cases 1 to 6. In Russia the medical council recommended the physicians of the districts where cholera appeared to hold in view the practice approved of by the British in the East. Diaphoretics and warm diluents were found useful in Moscow. The late Sir David Barry wrote from St. Petersburgh, that two German physicians there had treated thirty cholera patients without losing one; their remedy was two tablespoonfuls of common table salt in six ounces of hot water, at once, and one tablespoonful of a similar mixture, cold, every hour afterwards; they always began by bleeding. In cholera patients in this country a vein might be opened, but as to any blood flowing that was rarely to be seen.

Stimulants, hot water, and vapour baths were used in Prussia, also bleeding and leeching.

In France Andral recommended bleeding, frictions, sinapisms, diluents, and opium. With respect to calomel, he says, "I cannot account for the prostrate veneration which English physicians pay to this metallic drug: I can only compare them to those poor Indians who, faithful to their ancient creed, persist, with words of mystic import, in plunging their sick into the charmed waters of the Ganges." Calomel, which Andral so condemned in his clinical lectures in 1831, is not so objectionable in cholera as opium, which he recommends. Dupuytren prescribed acetate of lead in cholera, and Recamier prescribed cold affusion, beginning with water at the temperature of 66°.

In this country one of the first remedies was the *cajeput* oil. It was considered afterwards only as good as the oil of peppermint, or any of the other stimulating essential oils. Then came the non-purgative *neutral salts*, as muriate of soda, nitrate of potass, &c., the saline treatment, which had many advocates. Mustard emetics, if administered early, were considered valuable. A strong solution of camphor, under the name of Ponsonby's drops, obtained celebrity. Good brandy was considered a preservative, but by opening the door to intemperance it became a powerful predisposer to the disease.

"It was found to attack the poor, the debilitated, and the debauched more frequently than others; bad food, imperfect clothing, and fear, favoured its development. Persons who enjoyed high health and spirits generally escaped. Hence every Government and Board of Health published directions and advice accordingly."

The treatment pursued by Professor Hart was, in the first stage, diarrhœa present, "a warm purgative of rhubarb and magnesia in cinnamon water, tincture of rhubarb, tincture of opium, and oil of cloves. In the second stage, stimulants were employed with astringents, both given by the mouth and in the form of enemata. The stimulants were brandy and water, wine, spirits, camphor, carbonate of ammonia, ether, phosphorus dissolved in ether as recommended by Magendie, &c. The astringents were decoctions of oak bark, logwood; alum and powder of galls, strychnine, &c. In the collapsed stage, with pulse at wrist imperceptible, but at the heart 120, blue shrunken features, dark circle round eyes and mouth, stridulous voice, cold white tongue, urgent thirst, black nails, shrivelled skin on the hands and fingers, with purging and vomiting of the wheyish fluid, cramps, &c., a mustard emetic was given, and sinapism applied to the stomach; after the action of the emetic, symptoms of reaction often took place. Experience taught, that to keep up reaction, stimulants should be given; camphor, oil of turpentine in ounce doses, &c., and frictions with oil of turpentine. Mercurial medicines, calomel by itself or with opium were often given with advantage. When reaction took place, it terminated either in rapid recovery, or fever, often of a typhoid type, supervened. *Nitrate of silver*, a scruple dissolved in two ounces of water, as an astringent, was found useful in checking vomiting."

Dr. Apjohn recommended ice to be given, as very effectual in checking thirst; and he also recommends a pill, containing two grains of calomel and half a grain of camphor, every hour. Opium, in large doses, he considers "a regular poison in the Asiatic cholera."

Such were the opinions and mode of treatment pursued by some of the most eminent medical men on the First Epidemic of 1832; now let me take a short review of the latest opinions on the Second Epidemic of 1848-9.

Reports on the "Cause and Mode of Diffusion of Epidemic Cholera, by Dr. Baly," pp. 232 and appendix. "On the Morbid Anatomy and Pathology, and the Treatment of Cholera, by Dr. Gull," pp. 220. These reports, recently published in one vol. by the Royal College of Physicians of London, contain a very full and valuable record and statistical history of the epidemic of 1848-9 in England. The information from which they were prepared was obtained from the replies of members of the medical profession in all parts of the country, to a series of questions addressed to them in circular letters issued by the Cholera Committee of the College of Physicians; from the reports of Dr. Sutherland and Mr. Grainger to the General Board of Health; and from Mr. Farr's able Report on the Mortality of Cholera in England in 1848-9; and the Registration Returns; also, from documentary evidence from the Director-General of the Medical Department of the Navy, and the Commissioners in Lunacy.

There are two maps showing the distribution of cholera in England; and five diagrams representing the deaths from cholera, and the temperature in London in the year 1849, in Berlin in 1848, in Paris in 1849, the deaths from cholera and mean temperature in London in 1832, the weekly fluctuations in the mortality from fever, &c., in London in 1849, and the mortality from diarrhœa and dysentery in 1846.

Dr. Baly remarks, that the feeling of the Profession is, "that an exclusive theory of the mode of propagation or diffusion of cholera cannot be maintained." "Amongst the eighty-four communications relative to this topic, there are thirty-two in which the writers either distinctly maintain that the disease is not contagious or infectious, and seven in which the contagious or infectious nature of the disease is asserted in an unqualified manner. On the other hand, in fifteen the writers admit the probability that cholera is propagated in more than one way, and in six it is stated, that the disease is communicable under some circumstances, or that instances of infection have been observed by the writers."

As to the remote cause of Asiatic cholera, there are six principal theories. The *first* theory is, that the disease spreads by an atmospheric influence or epidemic constitution, and that the particular localities affected are determined by certain localizing conditions, as, circumstances which render places insalubrious, and a susceptibility of the disease in the inhabitant produced by the habitual respiration of an impure atmosphere." The *second* theory regards the cause of cholera as a morbid poison which undergoes increase within the human body, and is propagated by contagion. The *third* theory, Dr. Snow's, supposes that the poison of cholera is swallowed, and acts directly on the mucous membrane; and afterwards in various ways reaches the alimentary canal of other persons, and produces the like disease in them. The *fourth* theory also assumes that the cause of cholera is a poison, but supposes that it is only reproduced in the air. The *fifth* theory is a modification of the fourth: "It admits that cholera matter is increased by fermentation in impure, damp, and stagnant air, but maintains that it is diffused by means of human intercourse." The *sixth* theory combines the second and fourth, "That the material causes of the disease may be propagated by impure air, as well as in and by the human body."

Of the six theories, Dr. Baly's conclusion is, "that alone is supported by a large amount of evidence which regards cholera as a matter increasing by some process, whether chemical or organic, in impure or damp air; and assumes, that although of course diffused with the air, it is also distributed and diffused by means of human intercourse."

"Certain general characters in a cholera epidemic are too well established to be disputed:" as—

1. The unequal and very partial distribution of the epidemic, which in this respect presents a remarkable contrast to epidemic influenza. Deaths from sporadic cholera occur every year, in all parts of the country.

2. The localities most severely visited by cholera have certain features which distinguish them from those places which escaped; and were, densely populated regions on the sea coast, or on great rivers, or near mines, especially coal mines. The cholera was three times more fatal on the coast than in the interior of the country; in towns it was most fatal in ill-ventilated houses, with imperfect sewerage, deficient supply of water, and accumulations of filth. In the Wakefield Asylum the most unfavourable condition to health in the building was bad ventilation. From Dr. Wright's report, it appears that the first patient attacked in the Wakefield Asylum was a female, on the day of her admission, from a workhouse where cholera prevailed.

3. The long duration of cholera in a country, or town of large size, is a distinguishing characteristic. In England in each epidemic it continued for about fifteen months; whereas epidemic influenza only continued a few weeks.

4. The intensity of cholera varies during its continuance in a country or large city, so that it has usually well-marked periods of increase and decrease. In London, in 1849, a relation subsisted between the variations in the mortality and the variations in the temperature. When the thermometer ranged between 55° or 71° Fahr., the great increase of mortality took place. The epidemic attained its height on the 4th September, when 336 deaths from cholera occurred in London. The thermometer stood at 67°; when it fell to 42° a rapid decrease in the mortality took place. At Berlin also, in 1848, there was a close correspondence between the variations in the mortality from cholera, and the variations in the external temperature. The reverse of this occurred in Glasgow, Paisley, and other

towns in Scotland, in 1848-9, in the middle of winter, when the epidemic reached its height; and in Stockholm and Paris there was a high mortality when the average temperature was below 55°. The influence of the temperature is not the only one capable of affecting the mortality, and is neither constant nor necessary in its operations. It is in many cases superseded by the marked preference which a cholera epidemic often shows for localities in which impurities of all kinds abound, with a low site, damp soil, want of ventilation, and a dense population.

These conditions seem to operate principally by the production of an impure atmosphere. A higher temperature favours the development of impurities in the atmosphere; also great stillness in the air, and a certain degree of moisture. In winter, a high temperature in public institutions, artificially warmed, favoured the development of cholera in them. In November, 1849, "the only deaths in Taunton were 58 in the Union Workhouse, there being only 168 deaths in the whole county of Somerset; and the only deaths in Hertford were 7 in the County Gaol, the whole number in the county being only 23."

To explain exceptional cases, especially the occasional rapid subsidence of the epidemic while the temperature is high, it is necessary to admit the agency of an unknown cause.

In the great outbreak, in the spring and summer of 1849, different towns began to be afflicted in succession, and not simultaneously. It sometimes happens that the most insalubrious places in a town escape, at least for a time.

*Pathology.*—As already observed in the epidemic of 1832, in the majority of cases in that of 1849, the affection of the mucous membrane of the intestines did not pass beyond the stage congestion, ecchymosis, hyperæmia, and œdema of tissue, with exfoliation of epithelium. In most cases the stomach was distended, the reaction of the mucous membrane was always either neutral or acid, according to Dr. Lendet, at the Hotel Dieu. The solitary glands were almost universally distinct. The reaction of the evacuations in cholera was alkaline or neutral, and the fluid part contained a large amount of albumen, according to Dr. D. Thomson's analysis. In no case examined by Dr. Parkes did the quantity of earthy phosphates expelled nearly equal the healthy standard, which is the opposite of what occurs in typhoid fever, there being an excessive increase in the stools.

Microscopical appearances of the evacuations: 1. Amorphous granular matter, and larger granules, fibrinous. 2. Minute bodies, nuclei. 3. Exudation cells, some large. 4. A few scattered blood corpuscles. 5. Columnar and scaly epithelium. 6. On evaporation, crystals of chloride of sodium in cubes and octohedra; occasionally also crystals of cerate of ammonia and cerate of soda, when decomposition commenced; prisms of triple phosphate.

Spleen and liver generally diminished in bulk, and gall bladder distended with dark bile; p. 50. Kidneys rarely presented any morbid change, but in the subsequent stages were often swollen, allied to Bright's disease; urinary bladder empty. Sanguineous discharge from the uterus, in the typhoid stage, not uncommon. Lungs were commonly healthy; frequently hypostatic congestion, bronchi congested. The muscular tissue of the heart was pale, often from one to four drachms of straw-coloured fluid in the pericardium. The blood in the cavities of the heart and large veins mostly in the form of soft dark coagula.

Schmidt found that "the density of the blood is increased in proportion to the duration of the process of exudation from the intestinal capillaries. It reaches its maximum in thirty-six hours, and then falls again as water is re-absorbed." The solids of the blood reach, after about thirty-six hours, nearly one-half more than the normal proportion. "The increase of the inorganic salts at the beginning of the disease, owing to the large amount of fluid poured out, reaches its maximum after four hours; afterwards, in a few hours, fall to the normal quantity, after eighteen hours sink very much below, and after thirty-six or forty-eight hours are still further diminished, according to the time which has elapsed."

The specific gravity of healthy serum being 1028, Dr. Garrod found it in cholera 1039 and 1041. He also concludes that "urea usually exists in increased quantities in cholera blood, but that the amount differs considerably in the different stages of the disease;" being small in the stage of collapse, and in excess when consecutive fever occurs.

The maximum specific gravity of the blood, from Becquerel and Rodier's tables, in men 1062, in women 1060. In cholera cases, in adult males from 1076 to 1081, and in females 1068 to 1074; and even in children under ten as high, in whom, in a healthy state, it would be about 1045.

In cholera patients who died during collapse, Virchow "met with no structural changes in the brain and spinal cord. There was well-marked venous hyperæmia, with œdema of the pia mater, and sometimes a slight increase of fluid into the ventricles."

Dr. Budd found pneumonia in four out of six cases, where the patients had lived forty-five hours after the attack.

Dr. Babington first called attention in this country, in the "consecutive fever" of cholera, to an eruption, after some days, of red spots on the wrists and hands, like nettle-rash on the face, which is tumid. On the second day the efflorescence is found over the whole trunk. The eruption is well marked on the third and fourth days. It declines about the sixth day, and terminates by a general desquamation of the cuticle.

Dr. Gull observes, "Whatever may be the nature of the cholera poison, it requires no definite predisposing conditions in the system to enable it to produce its effects. It was fatal at all ages, nearly equally in both sexes, and neither the weakness of infancy, the vigour of manhood, nor the decrepitude of age, was a safeguard against its inroads."

The number of deaths in England in 1849, from diarrhœa and cholera together, was upwards of 72,000. It was most fatal to infants and persons over 55; the mortality was lowest from 5 to 15 years.

At the beginning of the epidemic the mortality was greatest among the males, but subsequently greatest among the females, when the mortality was at a high rate.

The existence of other diseases seems not to have predisposed to cholera. In only six out of eighty-nine cases examined by Dr. Gairdner were there traces of chronic lesions in the organs. The same was also noted by Schmidt. Mr. Grainger observes, "Abundant evidence was afforded that habitual drunkards were highly predisposed to cholera," &c.

Epidemic cholera has prevailed in this country in the autumn months. The sweating sickness, in the fifteenth century, made its five visitations at the same season. The plague of the seventeenth century also prevailed in the autumn.

Of 39,468 cases of epidemic cholera registered, 25,684 were fatal within eighteen hours; the average duration of all being a little over two days; whilst sporadic or summer cholera has a duration of five days.

*Treatment.*—With respect to the treatment of cholera, Dr. Gull observes: "In European countries, the poison of cholera produces its first effects on the system gradually, as indicated by diarrhœa, varying in duration from a few hours to several days. The diarrhœa was arrested by various remedies in a large number of cases. Opium was a constant ingredient, with astringents, aromatics, and diffusible stimuli: a recumbent position is an important measure, it prevents exhaustion," &c.

Dr. Burrows says, "The facility with which the serous diarrhœa may be checked depends mainly upon the period of the epidemic when the treatment is adopted," &c.

The uniform success which attended the house-to-house visitation, in London and Dumfries, cannot be considered independent of the decline of the epidemic, which had reached its acme in both cases before the preventive measures were adopted. In the metropolis, from 1st September to 27th October, 1849, there were 43,737 cases of diarrhœa discovered, and 978 cases approaching cholera, and only 52 cases which passed into cholera after treatment. In Glasgow, out of upwards of 13,000 premonitory cases treated, only twenty-seven passed into cholera.

Many eminent practitioners, however, found the diarrhœa premonitory of cholera could not with certainty be stopped, and that many cases were uninfluenced by any treatment.

Dr. Gull observes, in the fully developed stage of cholera, "medicines administered internally must be of small power. The pathological condition of the gastro-intestinal membrane is such that absorption is then almost, if not quite, suspended; and medicines, when retained in the stomach, form but an inert accumulation."

As a remedy, calomel has been more fully tested in this country than any other; there appears to be no argument in favour of its exhibition, and its value must be determined by the results. Of 365 cases treated by small and frequent doses of calomel, 187 died and 178 recovered. Dr. Ayre, the great advocate for this treatment, in the last epidemic, reports 365 deaths out of 725 unequivocal cases.

The reporter observes: "Under various and opposite plans, the recoveries, even in severe cases, averaged from 45 to 55 per cent., according to the period of the epidemic; they should, therefore, exceed the highest of these numbers before they can be adduced in proof of the value of any particular method of treatment."

Dr. Hill treated twelve cases at the Peckham House Lunatic Asylum, with small doses of calomel and opium, frequently repeated, and "was so unfortunate as not to save one."

Dr. Gull states, "although opium and diffusible stimuli—brandy, camphor, and ammonia—were used at an early stage of the disease, as collapse set in, they not only failed to produce any favourable result, but often aggravated the symptoms."

The expectations excited by the early success from the use of chloroform were not realized in its subsequent employment by Dr. Hill, at the Peckham Asylum. The perchloride of carbon, in five or ten grain doses, and a solution of camphor in chloroform, acted as powerful stimuli; but the results did not indicate that they possessed any especial therapeutic value. Dr. Lang found "musk quite useless, camphor doubtful." Dr. T. Thompson had seen reaction promoted, in a few cases, by administering six drachms of oil of turpentine, and after repeating small doses at intervals of a quarter of an hour; in other cases he did not observe any effect.

Ice was generally grateful to patients in approaching collapse, and probably served to arrest the discharge. Dr. Arnott proposed a mixture of ice and salt, in large quantities. In Petersburgh it is stated that warm drinks were avoided, as they increased the discharges, and that ice and iced water were certainly most serviceable. Salines were sometimes given instead of common water.

In five cases, reaction seems to have been accelerated by the use of the wet sheet. Emetics, in the early stages, were sometimes of use, and in collapse the effects were equivocal. Bleeding was not much resorted to in the last epidemic. In the consecutive fever local bleeding seems to be indicated. Leeching the epigastrium, temples, or cupping the back of the neck, were of service in obviating cerebral congestion, but if carried too far, were injurious by exhausting the patient.

Under the head " Empirical Treatment—Specific Remedies. Quinine, strychnia, arsenic, sesquichloride of iron, nitrate of silver, nitrous acid, chlorine water, sulphur, sulphuric acid, bichloride of mercury, charcoal, &c. The failure of those methods of treatment, which, from being based upon some supposed indications of the disease, may be called rational, led naturally to the employment of almost every active medicine in the materia medica. It is notorious that the results have been discouraging, notwithstanding the bold assertions to the contrary. The state of the patient in the collapse of cholera is so unfavourable to the absorption of medicines that, even if we know the remedy in itself most appropriate, we could not anticipate great results from its administration by the mouth at this period."

*External Means.* The application of heat in the earlier stage of the disease allays cramps: in the stage of collapse it is generally oppressive, and tends to exhaust the patient. " Cold affusion was highly spoken of on the Continent as a means of producing reaction. The patient was placed in a warm hip bath, and cold water poured or thrown over the head, back, and chest. This was done quickly, and the patient then placed between warm blankets. If the first application was followed by any improvement, the operation was performed every three or four hours.

" The 'wet sheet envelope,' in the milder cases, favoured reaction; but when the disease was severe, it was useless or injurious."

By the inhalation of oxygen, galvanism being employed at the same time, in the stage of collapse, the heart's action for the time was increased, but no permanently favourable influence was exercised by those means in the majority of cases.

Saline injections into the veins were not much used during the last epidemic. The results, as in 1832, were generally unfavourable. Dr. Gull, however, seems rather favourable to this mode of treatment at an early stage, and where the loss of fluid has been very great. " In an adult, probably not more than from forty to sixty ounces should be injected without intermission, slowly, in about twenty minutes."

The soluble salts, as determined by Schmidt's analysis of the liquor sanguinis, being 9 parts in 1000 of water, bear a close correspondence to the analysis of the evacuations in cholera by Mr. Herapath (*Medical Gazette*, 1849, p. 841). This is near the proportion in which the soluble salts should enter into the fluid to be injected; the specific gravity would be about 105, and the temperature of the fluid from 105° to 110°.

In the *Lancet* (October 1st, 1853), Dr. Rees advises the injection of a saline fluid of the specific gravity of the serum, 1030, at 60°; his reasons being, that a lower density would endanger the integrity of the corpuscules, from too free an endosmosis into them; a danger increased in cholera, owing to their contents being concentrated by the drain of fluid which has occurred. " Approximate constitution of the salt to be used for injection into the veins in cholera:

| | | |
|---|---|---|
| Chloride of Sodium . | 60 | parts by weight. |
| Chloride of Potassium . | 6 | ,, ,, |
| Phosphate of Soda . . | 3 | ,, ,, |
| Carbonate of Soda . . | 20 | ,, ,, |

By dissolving 140 grains of this salt into forty fluid ounces of distilled water, and filtering, we obtain a fluid having decidedly a saline taste, a faintly alkaline reaction, and nearly approximating in its constitution to the fluid effused, minus the organic substances. These are small in amount," &c.

The trials which have been made of *medicated venous injections* in cholera are too few to admit of any deduction from them. The cases were in too far advanced a stage, also, to expect a favourable result. Laudanum and camphor have been used in this way, but unsuccessfully. Dr. Little, of Sligo, in 1832, used a small quantity of alcohol, with the saline injections, and has repeated this practice in the last epidemic, and with success. In one male, aged 22, in a few hours he injected a quantity of alcohol equal to six ounces of brandy; at four times 250 ounces of saline fluid, each pint containing two drachms of alcohol. The recovery of the patient was complete.

The most important indication for treatment in the consecutive fever, *uræmia*, is the depuration of the blood from the urinary secretions. The derangement of the kidneys is rather congestive than inflammatory, and these organs regain their normal condition as the general circulation is restored.—*Asylum Medical Journal.*

## SIMULATED OR "PHANTOM" TUMOURS.

Among the circumstances which combine to make the investigation and diagnosis of abdominal tumours difficult, is the existence of a class in which the symptoms are so changeable that it becomes almost impossible to decide whether or not any tumour does exist. The signs are present one day, entirely absent on another, then present again, in a most perplexing manner. Every practitioner of experience must have met with such puzzling cases; but to those who have not, it would be impossible to convey any idea of the degree to which they sometimes simulate real tumours. Dr. Bright, in his papers on Abdominal Tumours, in the Guy's Hospital Reports, mentions a case in which, in an hysterical woman, the surgeon had been induced to attempt ovariotomy, believing that an ovarian cyst was present. The incision having been made, no tumour whatever could be found, and the operator was obliged to desist. The woman fortunately recovered, and the tumour at a subsequent period again made its appearance. One of the earliest allusions to this deceptive class of cases was, we believe, by Dr. Bright; and in the wards of Guy's Hospital they have since been the subject of much investigation. Our own knowledge of them has been chiefly derived from the clinical observations of Drs. Addison and Gull, under whose care several very instructive cases have occurred during the last few years. To the latter gentleman it is, we believe, that the affection is indebted for its very appropriate name of "phantom tumour." We shall attempt in the following sentences a short summary of such facts as have been made out respecting them, but shall not occupy space with the details of cases, as the disease is one in which the prominent symptoms, from being essentially unreal, are interesting rather to the manipulator at the bed-side than to the reader of notes. Dr. Bright's allusion to the subject, to which we have referred, is as follows. In speaking of reported cases of disappearance of ovarian cysts, the experienced physician states:—"It is even possible that a certain number of these cases may be set down as instances of erroneous diagnosis; for there is no question that the diagnosis is not always obvious. There is one class of cases more particularly liable to lead the unwary and inexperienced into error respecting the disappearance of an abdominal tumour; I mean cases of hysterical distention of the bowels—for, although the swelling in these cases is essentially tympanitic, yet occasionally, from the singular way in which the intestines are partially distended, and remain so for days and weeks at a time, they sometimes give completely the forms of tumours; and sometimes even indistinct fluctuation may arise from fluid fæces, or even from the co-existence of a distended bladder; and sometimes the large accumulation of hardened fæces has led to a belief of a more solid tumour." To state them *seriatim*, we have then the following, as the chief conditions on which these variable tumours may depend:—1. Distention of the bladder. 2. Solid fæcal accumulations. 3. Irregular contractions of the intestine at two points, and distention of the intervening portion with flatus or with fluid fæces. 4. Spasmodic rigidity of a part of the abdominal parietes. It may, perhaps, seem almost superfluous to add the last, but practically, it is one of the most frequent sources of deception. An hysterical patient is quite capable of making a circumscribed portion of the abdominal wall rigid and hard, while the rest remains comparatively flaccid; and even in a person of calm nervous system the same condition may be produced by an instinctive reflex act, for the protection of a part of the belly which is tender on pressure. The recti muscles are peculiarly apt to be the seat of these contractions, which may, however, also occur in the lateral regions of the abdomen. It is rare, perhaps, for any one of the above-mentioned causes to exist singly and uncomplicated by any of the others. Neither of the first two, indeed, unless exaggerated by one or other of the latter, could properly rank as a "phantom" tumour. Hardened masses of fæces are probably, however, the most frequent of the exciting causes of the affection. By the irritation produced by their lodgment, the intestines are made to contract irregularly, and local tenderness is also induced, which latter, in its turn, acts as an excitant, in producing reflex rigidity of a part of the abdominal parietes. It has been observed of phantom tumours, that they are by much more frequent on the right than the left side, and that not rarely there are present in connexion with them indications of renal irritation. Both of these circumstances are probably to be explained by reference to the facilities afforded by the cœcum and ascending colon for the delay and accumulation of scybalous fæces. The period of early adult life would appear to be the one most liable to the development of this chain of symptoms. The simulated tumour in question is by no means met with only in the female sex, some of the most marked examples of it that we have seen having been in young men. As it regards treatment, that should of course be modified according to the peculiar circumstances of the case. A brisk purgative will probably be a remedy almost always useful, and afterwards a course of nervine tonics, or perhaps of antispasmodics, may be exhibited with benefit. The chief importance of the cases is in the lesson they convey as to the necessity for great caution before pronouncing positively as to the existence of an abdominal tumour. The surgeon should always be content, in doubtful cases, to examine his patient, on several separate occasions, before venturing an opinion. In most cases, probably, the careful employment of percussion and palpation will be competent to decide the question correctly; but if there be the least doubt remaining, the diagnosis should be deferred until, after the free action of a purgative, a second examination has been instituted.—*Medical Times and Gazette.*

## SUMMARY.

*Dangerous Results of using artificial flavouring Compounds* (*Butyric Ether in Ice Cream*).—We extract the following interesting remarks from the "American Journal of Medical Science," read by Dr. Alley for Dr. A. A. Hayes, before the Boston Society for Medical Improvement:—"The sample of ice cream, and the flavouring essence used abundantly in preparing it, now exhibited, were intended to form part of the refreshments at a festival in Beverley, Mass. Some of the attendants having tasted the ice cream soon after it was made, and before it was sent to the place of meeting, were rendered quite sick within three hours after eating it; and the apprehensions felt by their friends, joined to their own fears of poisoning, produced much excitement in the town. These substances were placed in my hands for chemical examination. The flavouring substance, having the odour of the pine apple, proved to be butyric acid ether, dissolved in spirit. It is well known that butyric acid is a product of fermentation, in which animal organized matter breaks up and reunites with the elements of other organic matter such as sugar. It is usually found in rancid butter, and in decomposing flesh, and other animal matters at that stage when the exhalations are supposed to be infectious. This acid, united to the base of ordinary ether, constitutes the flavouring ingredient resorted to in this case, and it was free from any mineral poison. The ice cream presented the usual characters of a nicely prepared article, in which mostly cream was used instead of milk, and it was entirely free from any mineral body of unusual occurrence. When subjected to chemical trials, the first odour of butyric ether having passed off, butyric acid was detected, and the cream seemed to have passed, *through the presence of the butyric ether*, into an advanced state of rancidity. Although the low temperature at which the ice cream is kept might be supposed to be an effectual guard against any chemical change in which butyric ether may be considered as playing the part of a ferment, yet it is also well known that sugar is produced in milk, and in organized vegetable matter in the act of freezing. Sugar thus formed, together with that added to the cream, may react with the elements of butyric ether at a low temperature to produce butyric acid, or incipient compounds may result, which, at common temperatures are converted into butyric acid. A number of flavouring extracts, equally objectionable, are largely consumed by confectioners as substitutes for the volatile oils, and cases of severe sickness and alarm are multiplied every season from the practice."

Dr. I. M. Warren remarked, that "he had been called to a family in which seven persons had been more or less poisoned by custards largely flavoured with 'extract of vanilla,' so termed; on analysis nothing of a poisonous nature could be detected, yet, undoubtedly, the symptoms were referrible to the said extract, which a cook, new to the family, had liberally used."

Dr. W. E. Townsend referred to cases of illness, caused, to all appearance, solely by eating what are termed "acidulated drops," and particularly of those termed "banana drops;" he believed that one death, at least, in the city, during the last summer, was to be ascribed to their use, and certainly several instances of apparent poisoning, declared by severe sickness at the stomach, &c.

*Solution of Tannin.*—Dr. W. Bayes, of Brighton, in the *Association Medical Journal*, recommends the following solution. He says: "Pure glycerine dissolves nearly its own weight of tannin, forming a very powerful local astringent application. The solution of tannin in pure glycerine appears to me to supply a desideratum long felt, and capable of a great variety of useful applications. The solvent property of glycerine over tannin allows us to form a lotion of any desirable strength, as the solution is readily miscible with water. The solution of tannin in glycerine, in one or other of its strengths, is peculiarly applicable to many disorders of the mucous membrane, readily combining with mucus, and forming a non-evaporisable coating over the dry membrane; hence it may be applied with benefit to the mucous membrane of the eye and ear in many of its diseased conditions. It forms a most convenient application to the vaginal, uterine, urethral, or rectal membranes, when a strong and non-irritant astringent lotion is desired. In local hæmorrhage, when the bleeding surface can easily be reached, it will prove very convenient; it may be applied either with a sponge or small brush. The solution should be kept in the dark, and should not be prepared for any great length of time before being used, or decomposition will occur. It is singular that glycerine does not possess the same solvent property towards gallic cid.

*The Use of Secale Cornutum in Hæmorrhage.*—Dr. J. A. Cummings, of Roxburg, in the Boston Medical and Surgical Journal, states, that "for a length of time I have used the pulverized ergot somewhat extensively, not only as a stimulant to the uterus in parturition, but as an *astringent*, either direct or operating through the agency of the nervous system, especially in cases of *hæmorrhage from the bowels*, arising from dysentery or other causes. I have often seen the most decided and permanent results from its exhibition. In numerous cases which could be given in detail, were it necessary, I have seen the ergot produce the most prompt and satisfactory effects in immediately checking the sanguineous effusion, and in many cases the effect has been permanent. In *hæmatemesis*, also, I have seen the most decidedly beneficial results from the use of ergot. In one severe case, which had for a long time resisted powerful remedies, it was used in substance by my direction, and proved completely effectual.

"In one case of *hæmoptysis*, I have used ergot, and the results were sufficiently satisfactory to insure my confidence in it as an agent, worthy of trial, at least, in other cases. It is my intention to test it more thoroughly, as a remedy in the treatment of hæmorrhage from the lungs. But especially in hæmorrhage from the *stomach* and *bowels*, I have confidence in its practical value as an astringent. Though it should not, in my opinion, supersede entirely the use of tannic acid, gallic acid, acet. plumb. and other well-known and truly valuable articles, where an astringent is necessary, yet, in combination with other articles, or in cases when other agents fail, the ergot will be found valuable. It may be given in powders in doses of from two to ten grains, repeated as often as is necessary. Its use is contra-indicated, of course, in pregnant females. Does the ergot operate through the nerves in hæmorrhage from the bowels, as it manifestly does in uterine hæmorrhage, in which it is so valuable?"

*On keeping Leeches in Health.*—Mr. Mark, of Callingford, finds that chlorate of potash, in the proportion of about a grain dissolved in a pint of water, is beneficial to leeches during the unhealthy season.—*Pharmaceutical Journal.*

*Function of the Sigmoid Flexure.*—O. Kohlrausch (*Zur Anatomie in Physiologie der Beckenorgane, &c.*, Leipsig, 1854), regards the sigmoid flexure in man as serving the purpose of relieving the sphincter ani from pressure.—*Association Journal.*

*Rotatory Motion of the Stomach.*—F. Betz (*Physiologische pathologische Bemerkungen über die Rotation des Menschlichen Magens*, Prager Vierteljahrschrift, 1853), denies that the stomach exercises a rotatory motion on the food; he founds his objection on the appearance observed on injecting with fluid the stomach of a recently killed cat, and on the arrangement of the muscular fibres in the human stomach. He attributes the apparent rotation which has been described to the movement of gases in the small intestines, the stomach resting, as it were, on an air cushion.—*Association Journal.*

*Neuralgia resulting from Herpes Zoster in elderly Persons.* By C. M. Durrant, M.D., Ipswich.—The pain which occurs during, or more frequently as a sequel to shingles, in very elderly persons, is sometimes so severe as to give rise to considerable apprehension both on the part of the patient, as well as in the minds of the friends. The affection is not a common one, and less so perhaps on the Continent than in this country; since it has been stated by M. Biett that, in more than five hundred cases of ordinary shingles, he had not once met with this complication. Three very severe cases have presented themselves to my notice within the last two years. In one of them, the pain accompanied the eruption; in the other two, it did not occur until this had disappeared. The pain is described by the patient as deep-seated, darting, and tearing, or, as one of my elderly patients graphically expressed it, "as if the flesh were being torn from the side with red hot hooks." The pain appears to be of a neuralgic character, and is often intermittent. In the treatment, quinine is the remedy which is likely to be most useful. In two of the cases above alluded to, it acted as a specific; and what is singular, on the suspension of the medicine for a day or two, the pain returned with equal intensity, again to be removed and cured by the persistence in the quinine. In the third case, which had resisted all other remedies, the quinine acted less speedily, but equally beneficially. The quinine may be given at the onset of the pain; but, if the tongue be coated, it will be better to commence the treatment with a few grains of blue pill, followed by a warm rhubarb and magnesia draught. I have seen the pain yield to quinine after the failure of veratrine, aconitine, chloroform, and a host of liniments with opium. Should, however, the quinine fail, the next best remedies would, I believe, be found in arsenic, iron, and cod-liver oil. External applications are not of much service.—*Association Medical Journal.*

*Cod-liver Oil in the Treatment of Neuralgia.*—I was induced (writes Dr. Durrant) to make trial of this remedy as a last resource in a case of the most severe facial neuralgia which I have ever witnessed. The pain was so severe that it amounted to agony, the tears involuntarily flowing over the cheek. Iron, quinine, and arsenic, in full doses, had severally failed in affording more than mere temporary relief. The oil had not, however, been taken longer than a week when the pain became sensibly diminished; and, by a perseverance in its use for a few weeks, the disease, which had existed for many months, was perfectly cured. This patient continued well for two years, when he again became the victim of a similarly severe attack. Recollecting the failure of other remedies in his former seizure, he begged that he might at once commence the oil, which desire was acceded to, and was attended with a like happy result. From the satisfactory termination of this case, I have been induced to prescribe cod-liver oil very largely in many forms of neuralgia, and, upon the whole, with decidedly good effect. Among the more severe cases in which I have seen cod-liver oil act with especial benefit, I may enumerate one of ocular neuralgia, a very severe case of neuralgia of the tongue, many cases of facial neuralgia, several obstinate cases of sciatica, and two or three cases of neuralgia of the rectum, the exquisite suffering from which I have found it both speedily and permanently relieve. Indeed, in this latter form, whether in combination with, or independent of, hæmorrhoids, the oil appears to act most beneficially, and I can with great confidence recommend its use. Since noting these memoranda, I find the value of cod-liver oil in neuralgia fully corroborated by Dr. Theophilus Thompson, in his valuable "Clinical Lectures on Pulmonary Consumption."—*Ibid.*

*Cause of Labour.*—Dr. Gustav Veil has recently discussed in an elaborate paper, among other interesting subjects, the cause of labour. He disputes the opinion that it is due either to the pressure of the presenting part of the child, to excessive development of the whole organ, or through menstrual congestion, and conceives that it is attributable to the pressure on the uterus, caused by the disproportionate growth between the organ and its contents. He says that there is a period when the development of the uterus ceases to keep pace with the growth of the fœtus; that irritation then takes place, and uterine action succeeds. He illustrates his position by reference to other hollow viscera, as the bladder when distended with urine, the rectum with fæces.—*Medical Circular.*

*Case of Non-Menstruation.* By Dr. Cumming.—Isabella K., æt. 21, when she first came under Dr. Cumming's observation, had never menstruated. Dr. C. had no record nor recollection of the ailments she had suffered from, before she became his patient—but when he was sent for, she laboured under symptoms simulating peritonitis. From these she recovered in two or three days, and was comparatively well for three weeks, when they recurred; and it became obvious both from this and her previous history, that nature was attempting at each menstrual period to establish the regular discharge, but failed—and that on failure of duly affecting the uterine organs, the *molimen* was expended elsewhere. It would be endless to detail the variety of forms and organs through which the *molimen* was made. Intense headache and abdominal pain were the most frequent causes of suffering, but she had vicarious discharges from the nose, eyes, and lungs at one time, a very peculiar eruption on the face at another, a hammer-like motion of one arm at another, and so on, till she exhausted almost every amenorrheal symptom on record. She had a great variety of treatment also, but nothing gave her more than temporary relief. With a view, however, to the discovery of the cause of the disease, and to its radical cure, an examination of the uterine organs was instituted. The vagina was of the normal length, and at the site of the os and cervix uteri, a very small tubercle was found, with a depression in which a bougie was introduced. This Dr. C. believed to be the os uteri, and it eventually proved to be so—but so minute were both the tubercle and the depression, that two medical friends who saw the patient along with him, and who had great experience in such examinations, maintained that he had *made* the aperture. The result of this examination was, that either the uterus was altogether wanting, or in a rudimentary condition, and nothing resembling the ovaries could be felt. After attending her from time to time for several years, Dr. C. lost sight of her; but somewhere about ten years from his first acquaintance with her, he was again sent for, and found her dying of phthisis. After her death, he procured with some difficulty a post-mortem examination, which was performed by Dr. Handyside, and attended by Dr. Simpson and Dr. White (of Buffalo, U.S.) The uterus was found to be half an inch in length, and the ovaries mere lines. Dr. Cumming exhibited the uterus and appendages to the Society.

*Dr. Simpson* mentioned, that he had seen a considerable number of cases of short or imperfectly developed uteri in the living subject. The imperfect development of the organ was ascertained, on examination by the finger, by the small and atrophic-like cervix uteri, and by actual admeasurement of the length of the cavity by the uterine sound. Instead of being two inches and a half in length, the cavity in such cases was only two inches, or more frequently only one inch and a half or one inch long. The subjects of this imperfect development were often well made and formed in other respects. But the malformation led to various functional defects, especially amenorrhea and sterility. The amenorrhea was usually persistent, and when a patient applied for medical relief, and who was already twenty-five or thirty years of age, this malformation was in a large proportion of cases found to be the organic cause. In some such cases of amenorrhea, there was great vascularity of the face and occasionally a most unconquerable form of acne. He had seen in some of these instances the wearing of an intra-uterine galvanic (or zinc and copper) pessary—gradually increased in size—followed by the best results, and even occasionally by cure of the amenorrhea. The uterus developed itself around such a foreign body, when it filled its cavity as it did around a fibrous tumour or an ovum.—*Edinburgh Obstetrical Society, Monthly Journal of Medical Science, September*, 1854.

*Case of Ovariotomy.* By Professor Langenbeck.—An unmarried female, æt. 34, had, for five years, had a gradually enlarging ovarian tumour, which at length attained so great a size that the abdomen was as distended as it is at the end of pregnancy. This tumour extended from the pelvis to below the false ribs; it was easily moveable, and was distinctly fluctuating to the touch. At the desire of the patient, and under the influence of chloroform, the operation of ovariotomy was performed. A finger's breadth above the symphysis pubis, an incision of 2¼ inches was made through the integuments of the abdomen, nearly in the line of the linea alba. The cyst, being seized with hooks, was first punctured by a trocar, which evacuated nearly nine quarts of clear limpid fluid, and thereafter it was pulled out until the pedicle of the tumour was completely exposed. The abdominal incision was closed with six sutures; strong double ligatures were then passed through and tied round the neck of the tumour; and next, a ligature was passed both through the pedicle and the lips of the wound. Finally, the tumour was removed by cutting through its stalk, immediately above the ligatures. The tumour presented one very large cyst; on the extirpated ovary there were two smaller cysts, the size of hazel-nuts, and the Fallopian tube was adherent by its fimbriated extremity. The evacuated fluid contained merely a few epithelial cells, and it coagulated readily with heat. The wound cicatrized in nine weeks, and during the healing process the patient was considerably troubled with colic pains.—*Deutsche Klinik,* 1853, *and Monthly Journal of Medical Science.*

*On the Behaviour of Alcohol in the Animal Organism, by* Dr. Ducheck.—There are now six kinds of alcohol well known—the æthyle, methyle, amyle, and acryle alcohols, the cetyle and the glyceryle. To each of these alcohols, there is a corresponding aldehyde, which differs from the alcohol by possessing two equiv. less of hydrogen, and also a group of characteristic acids having two equiv. more of oxygen than its corresponding aldehyde. The process of oxidation, however, does not end here, but by the continued absorption of oxygen finally water and carbonic acid are formed.

The author, by means of a stomach pump, introduced into the stomachs of three dogs large quantities of absolute alcohol (from half ℥ to 60 grms), partly pure and partly diluted; he also injected into the rectum of a fourth dog 1½ ʒ of fusel oil diluted with water. The phenomena exhibited in all the four cases were :—

1. Intoxication more or less strong, and death sooner or later, according to the quantity of alcohol introduced, and to the slow or rapid manner of administration. 2. These phenomena occurred in the same manner, whether the alcohol had been introduced into the stomach or the rectum. 3. The blood appeared somewhat darker, was of an alkaline reaction, and was distinguished by an odour like aldehyde that was diffused through all the organs. 4. In two cases aldehyde was detected in the blood; while 5th, no further product of oxidation of the same was found. 6. Alcohol was not once detected in the blood. 7. The stomach, even a short time after the introduction of alcohol, contained only a very small amount of it. 8. The urine, as well as the fluid in the cerebral ventricles, exhibited a peculiar but evanescent odour of ether. 9. No important anatomical change existed in any of the organs. 10. The action of amyle-alcohol appeared far more decided than that of the æthyle-alcohol. Prom these facts it follows, that the alcohol becomes absorbed and chemically changed, and that these two actions occur so rapidly, that even after a very short time we can only detect the aldehyde.

If it be granted that alcohol is oxydised in the system into aldehyde, then it must be admitted that this oxidation takes place either in the stomach or in the blood. Oxygen is, in every case, necessary to the transformation of the alcohol; in this respect, therefore, the formation of aldehyde meets with no impediment in these places. The change, however, cannot take place in the stomach, since, 1st, we can never detect the presence of aldehyde in it; and 2nd, since the conditions requisite to the formation of aldehyde in the stomach are the same as in atmospheric air, the change of the alcohol in the stomach taking place slowly, as when exposing a large amount of it to the atmosphere, so that intoxication would occur much later. This view will finally appear untenable, if we but consider that intoxication, consequently the formation of aldehyde, occurs equally if the alcohol be introduced into the rectum, whose cavity, as is well known, contains no oxygen. If now the alcohol remains unchanged in the stomach, its transformation must necessarily take place in the blood. The question arises, how does the alcohol enter the blood? Many experiments which the author made of the penetrability of the membranes (hog's bladder) to alcohol and aldehyde, place it beyond doubt that the walls of the stomach can be penetrated by the alcohol, and thus be taken up by the vessels. Another question now arises? does the transformation of the alcohol take place after it has been carried unchanged to a remote part of the body, or immediately after its absorption by the blood-vessels? Several facts are opposed to the first supposition. Whenever alcohol in great amount comes in contact with blood, coagulation necessarily occurs. This is proved by the daily experience and unsuccessful attempts of earlier experimenters, who have studied its action whilst injecting alcohol into the veins. Such coagulation will then occur if, as in the first three experiments of the author, a great quantity of alcohol penetrates through the walls of the stomach without oxidising, that is to say, without becoming changed into aldehyde. And yet in the bodies of men or animals that have suddenly died from intoxication, there has never been found any trace of coagulation, that had taken place during life. Experiments show that only a very large amount of aldehyde, introduced rapidly and in an undiluted condition into the veins, can produce coagulation; that this, therefore, never takes place when introduced slowly in small quantities and tolerably diluted. From this, therefore, we conclude, that alcohol only after it has been changed into aldehyde can remain any length of time in the blood. Besides the rapid penetration of aldehyde into all the tissues even in one or two minutes, can be more readily explained by its greater capacity of imbibition, than by assuming the same of alcohol, and supposing the change into aldehyde to take place only after the imbibition of the former into the organs.

These reasons, and the impossibility of chemically detecting alcohol in the blood, make it probable that the alcohol enters only the absorbent vessels, and that on the appearance of even the smallest amount in the interior of these, oxidation immediately follows. This view of the rapid formation of aldehyde is supported by the large surface and fine porous condition of the walls of the stomach. Since then it is assumed that intoxication is not produced by the action of alcohol upon the stomach, it must, therefore, commence with the formation of aldehyde, and this consequently must be the intoxicating principle. The author, to prove this, injected into the veins of three, and into the stomach of two dogs, aldehyde partly diluted and partly undiluted.

If it now be granted that intoxication commences with the formation of aldehyde, it may be asked whether it ends with its disappearance from the blood, or whether the symptoms of intoxication are connected with the presence of the further process of oxidation, acetic acid, &c. The author's experiments show that acetic acid is never present in the blood of animals that have died during intoxication, although it has been found after this has passed off. Besides, the author made the direct experiment of injecting dilute acetic acid into the veins of a dog—no narcotic effects followed. These facts lead to the conclusion that the period of intoxication is limited to the disappearance of the aldehyde, that is to say, to its conversion into acetic acid. Consequently the above-stated view, that intoxication is due properly only to the aldehyde receives further confirmation.

In two experiments oxalic acid was found in the blood, as a further product of oxidation of alcohol. The ultimate products of this continued oxidation must of course be carbonic acid and water.

When the process of alcoholic combustion by the continued absorption of oxygen takes place, the blood is in this way deprived of a great amount of oxygen, which would otherwise be applied to the combustion of other substances. The blood therefore must undergo a change, and the normal course of metamorphoses be impeded.

It is therefore not improbable that the rapid withdrawal or the great want of oxygen is essentially the fundamental cause of *most*, if not all, the phenomena of intoxication. The trembling, the transient paralysis of the lower extremities—which we know to be the case with men, and which were not wanting in any of the author's experiments, cannot therefore depend immediately upon the chemical action of alcohol, nor their disappearance upon the inhalation of much oxygen during intoxication, which was observed by the author in his experiments upon birds and dogs. Death, in consequence of the so-called alcoholic poison, must occur, agreeably to the above, when with the presence of a great amount of aldehyde in the blood, there exists not at the same time a sufficient amount of oxygen to transform it into acetic acid.

The anatomical dissection in the cases of sudden death by alcohol presents no change of any organ, of the brain or its membranes—in the lungs only were found a spurious œdema. Emaciation was shown in long continued habits of intoxication; in the brain though, no change, not even that thickening of the membranes and dropsy in the ventricles, quoted by Huss. In two cases there was blennorrhœa of the external auditory canals. The stomach and its membranes were, in opposition to others' account, always normal. Only in one case, where but little amount of brandy had been taken, was much fat found. In conclusion, the author abridged his obtained results as follows:—

1. Alcohol undergoes in the system continued combustion, of which the intermediate products are found in the blood.

2. Intoxication is dependent upon the existence of aldehyde in the blood.

3. The action of aldehyde upon the blood is the rapid withdrawal of its oxygen.

4. Therefore the combustion of other substances, consequently their metamorphoses, are prevented or retarded.—*Extracts from Schmidt's Jahrbuch, and Chemist.*

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## MEATH HOSPITAL.

### *Cases of Hæmorrhage from the Bowels, Lungs, and Nose, in which the Ergot of Rye was successfully used.*

BY CATHCART LEES,

PHYSICIAN TO THE HOSPITAL.

Although the efficacy of ergot of rye as a remedy in uterine hæmorrhage has been long established, yet the opinion of the Profession not being so unanimous as to its action in cases of hæmorrhage from other parts of the body, I think it may be useful to communicate a short notice of some cases out of several, in which this medicine has been given as an internal styptic in the Meath Hospital with great success; not only in hæmorrhage from the bowels, but also in that from the lungs, and in violent epistaxis.

*Reported by* Mr. Andrew Nolan.

Case I.—*Typhoid Fever; Hæmorrhage from the Bowels; Peritonitis by Perforation.*—A man æt. 36, was admitted to the Meath Hospital, labouring under an apparently mild form of typhoid fever; he was nine days ill, with diarrhœa of a very bilious character, and occasional slight epistaxis; there were a few rosy elevated maculæ on his chest and abdomen, and gurgling in the iliocæcal region could be heard, on making slight pressure, but he complained only of weakness, and a confused feel in his head; next day he had slight hæmorhage from the bowels, for which he was ordered four grains of gallic acid every three hours; the next night, very profuse hæmorrhage took place from the bowels, he was greatly prostrated; p. 132; the chest and abdomen were covered with sudamina, there was no tenderness of the abdomen, nor tympanitis. He was now (eleventh day) ordered ten ounces of wine, and to have one scruple of ergot of rye in a little warm water every three hours; four doses of this completely checked the bleeding, which never returned, but he sunk gradually, and died quietly on the fourteenth day of his illness. On examination, we found extensive peritonitis, caused by a very minute perforation at the lower part of the ileum in the centre of one of Peyer's glands, several of which were in a state of ulceration; there was not any appearance of blood in the intestines. This case I consider as highly interesting; first, from the insidious nature of the disease, as though there was extensive ulceration of the glands in the ileum, and even perforation of the intestine, with general acute peritonitis, yet he had never made the least complaint of any pain in the abdomen. In fact, the character of the fever, along with the diarrhœa and hæmorrhage, was what chiefly enabled me to predict the condition in which we found the intestinal tube. The action of the ergot of rye was well exemplified in this case, as it completely checked the hæmorrhage, which probably was caused in some degree at least by ulceration of small vessels in the diseased glands, and not merely by exhalation, as I have no doubt was the condition of the mucous membrane of the nose in the epistaxis which occurred in the following case.

Case II.—A stout young man, æt. 20, a labourer, was attacked on September 19th with pain in the head, shivering, and the usual symptoms of fever. A profuse attack of epistaxis occurred on the 23rd, and recurred every day up to his admission to hospital on the 27th, i. e., the ninth day of fever; his skin was very hot and dry, covered with small indistinct spots, not disappearing on pressure; tongue very dry, red, and coated with black sordes; pulse 100, soft, full, and compressible; he raved greatly, and was very uneasy; bowels regular, abdomen flat; passes urine freely. He was ordered four grains of gallic acid every three hours, and had no recurrence of the hæmorrhage till 8 P. M., when a profuse attack occurred, his bed being perfectly saturated with blood in a few minutes. Mr. Parr gave him a scruple of ergot immediately, which checked it, and he then continued it for every three hours until he had taken six powders. There was no recurrence of the hæmorrhage, but next day the action of the heart was very feeble, for which he was put on wine, and he passed through the usual course of ordinary maculated fever without any other bad complication.

CASE III.—In another case, under the care of Mr. Henry Ussher, acting at present as clinical clerk to the medical wards, a girl, æt. 19, was admitted to the Meath Hospital, attacked with profuse hæmoptysis, caused by running with a heavy child in her arms to overtake an omnibus. When I saw her she had expectorated about a pint of very fluid blood, and had constant racking cough, with expectoration of blood and mucus. Pulse small but quick, 100 in the minute; she complained of a sensation of weight and oppression in the anterior part of the chest; respiration was loud, and without any râle, under both clavicles; but at the base of the right lung it was very feeble, mixed with a large, moist, crepitating râle, and percussion elicited a dull sound over this part. She was ordered ergot of rye, one scruple every three hours, till the blood disappeared from the sputa. She felt slight nausea after each dose, but all appearance of blood ceased after the third; the pulse fell down to 80, and she expressed herself much relieved. She had a slight recurrence of hæmoptysis in two days afterwards, but I gave her five-grain doses of the ergot, when it ceased, and she has had no recurrence of it. This case, which appears to have been one of the diffused or uncircumscribed forms of pulmonary apoplexy, seated at the base of the right lung, furnishes us with a strong instance of the power of the ergot in controlling hæmorrhage, as, when it was given to her, she was evidently labouring under hæmorrhagic fever, and the large, loose râle heard at the base of the lung indicated that there was fluid blood in the bronchial tubes; yet, as soon as the ergot exerted its specific action on the system, the circulation was reduced, and the hæmorrhage ceased; so that I think it may be found a useful substitute for bleeding and digitalis in cases of active hæmorrhage, when we might not wish to use either of these powerful remedies, as in certain forms of disease of the heart, in which we should be cautious of inducing syncope.

Although in many cases it is difficult to ascertain the real therapeutic value of a medicine, the "post hoc, ergo propter hoc," casting a doubt on its remedial action, yet when we see the same effect follow the administration of the same medicine in different cases, I think we are justified in attributing to it a peculiar agency, as in the hæmostatic action of the ergot of rye in these cases, as well as in several others, in which I have used it since it was suggested to me by our respected apothecary, Mr. Parr. In most of the cases it appeared to depress the circulation, thus confirming the observations of Dr. Hardy, as to its effects on the parturient female, but in one man it acted directly on the nervous system, causing delirium, tendency to coma, with great depression of the pulse; therefore its action should be carefully watched. Two very interesting cases are recorded by Dr. Maunsell (in the fifth volume of the Dublin Medical Journal), when very serious nervous symptoms occurred in the practice of Dr. Johnson and Dr. Churchill, after the administration of the ergot in large doses to pregnant women.

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## RICHMOND HOSPITAL.

### *Case of Congenital Malformation of the Bladder, with Remarks.*

BY CHRISTOPHER FLEMING, M. D., M. R. I. A.,

SURGEON TO THE HOSPITAL.

The following case may possess some interest in its history and details.

*Hypogastric Hernia; Exstrophy of Bladder; Deficiency of Symphysis Pubis; Complete Epispadias.*—Patrick M'Gauley, aged five years, was brought to hospital in September, 1854, with incontinence of urine, connected with malformation of the bladder. The mother stated that she observed at the birth of the child a depression above the pubis, about the size of half a crown; that this had a circular margin, at the upper part of which the umbilical chord was attached, whilst at the lower was situated the rudimentary penis; that the colour of this depression was that of the surrounding integuments; that the scrotum was prominent, and both testicles could be felt in their normal position; that after six months, or thereabouts, a swelling presented itself at the upper part of the depression; that this has gradually increased; that its size, shape, and tension were influenced by the position of the child, and the contents of the intestinal canal; and that the urine has dribbled off incessantly and involuntarily from birth, from the bottom of the cavity noted. Such is the mother's history of the early and more advanced growth of this case. She has other children who are perfectly formed. She and her husband are free from any abnormal defect, neither is there any malformation in any immediate members of the family, to her knowledge. The general conformation of the child is otherwise perfect. He has all the appearance of excellent health. His features are mild and prepossessing, His limbs are well formed; his stature is erect, and his gait by no means peculiarly remarkable. The lower limbs are perhaps slightly apart when moving, but he can walk and run about like any other boy of his age, and does not appear to suffer any annoyance from his ailment.

On exposing the abdomen, a tumour presents itself in the hypogastric region, somewhat globular in shape, and about the size of a large apple. Its transverse is rather longer than its vertical diameter. Its surface is irregularly nodulated, and the integuments covering it are of variable thickness, in some portions, especially along its upper boundary, being almost diaphanous and marked with cicatrices; whilst a projection in its inferior communicates the sensation as if it were an offset from the general sac. The lower half of this tumour laps over that part of the mucous surface of the bladder corresponding to the trigonè, which, with the whole of the penis, excepting the glans, escapes observation until the tumour is raised up, or pushed within the abdomen. This aspect of the tumour presents an irregularly excoriated surface, as it approaches the mucous coating of the bladder, with which it is continuous inferiorly, and which it much resembles. A greater or less quantity of urine wells up the intervening spaces, and keeps the surrounding parts constantly wet. This tumour possesses all the features of an ordinary intestinal hernia, and is perfectly and wholly reducible within the cavity of the abdomen, where a distinct oval and tendinous aperture is felt. The upper extremity of this aperture is at the umbilicus, the lower at a supplementary ligamentous symphysis, and the lateral portions, very strong and fibrous, appear to be the inner margins of the recti muscles, separated from each other, and arching around to their insertion below, at a slight distance from their usual attachment. The exposed portion of bladder exhibits papillary eminences, marking the termination of the ureters at the base of the "trigonè," whilst at the anterior angle an imperfect channel for the passage of the urine commences, the penis being divided so through its entire body, as to constitute "complete epispadias."

Such condition of penis almost presupposes the absence of bony symphysis, at the same time that a very strong ligamentous band is discoverable as supplementary to it, but below the penis and behind the existing scrotum, particularly ascertainable by the introduction of the finger into the rectum. By combining with the latter expedient, the counter-pressure of a finger on the exposed portion of the bladder, the thickness of this band is easily ascertainable, and the very thin partition between the two cavities equally so. From this proceeding alone did the boy appear to suffer any pain, and that pain was distinctly referrible to the extreme sensitiveness of the trigonè. From the absence of any pubic prominence, the scrotum is not pendulous, on the contrary it is rather flattened, but has its peculiar arrangement of integument. The testicles are easily felt; their position in the scrotum appears to depend much on the hernial protrusion, as when this is considerable, they approach more or less the external rings of the corresponding sides.

Two most accurate drawings have been executed by Mr. Conolly, illustrative of the lesions in the above case, the one representing the tumour when fully protruded, and concealing the exstrophied bladder, with the end of the penis projecting underneath; the other with the tumour raised and exposing the latter organ in its transit to the bladder.

*Remarks.*—Congenital malformations of the bladder, similar to that existing in the above case, are of more frequent occurrence than the other varieties observed; and the great resemblance of the recorded cases to each other is so remarkable, that little can be added to the anatomical or physiological peculiarities already noted by those who have described them.

The combination of the principal features specified in the summary given at the head of the case under consideration, possesses no novelty, inasmuch as such have already been most accurately described. The absence of the umbilicus in its normal situation; its close approximation to the pubis, and its identification with the existing deformity, have each received due attention. In the case of M'Gauley, the distance of the ensiform cartilage from the pubis was between ten and eleven inches, and that of the umbilicus from the latter was little more than two. The existence of complete epispadias admitted of examination of the tract of the urethra to its termination in the bladder, and presented an accurate miniature of its several divisions in an organ less than two inches in length. Perhaps the tumour, which I term an hypogastric hernia, deserves more than a passing notice, inasmuch as such tumour is not always present, and the prevention or controlling of it is of practical moment, and should early attract the attention of the surgeon when it manifests itself.

I view such complication as a true intestinal hernia, quite unconnected with the bladder, beyond that connexion which the peritoneum reflected from its posterior aspect naturally imparts to it. Its sac is distinct, and formed by a pouch of peritoneum escaping through the linea alba, defective below the umbilical aperture, and its contents are intestinal. I cannot reconcile to myself the opinion that a portion of bladder so diminutive as the exstrophied part must be in the infant, can grow into a sac, or form a part of a sac to any extent, so capacious as existed in the present instance. Here there was decidedly intestine in the sac, and its reduction, which was easily effected, did not produce a proportional protrusion of the malformed bladder. Apart, however, from these, which, doubtless, are interesting considerations, the important question suggests itself, what treatment is available? Can the poor sufferers from such a loathsome visitation be relieved from their most distressing inconveniences by other than by mechanical contrivance? Can any expedient be adopted which would, in some measure at least, command a distinct and separate channel for the exit of the urine, and so permit the contraction and cicatrization of the exposed mucous surfaces, by the several surgical resources within reach? Either of two plans has suggested itself to me, each being an imitation of a congenital vice of conformation where the bladder is absent. The one is to carry the urine directly into a urethra manufactured for the purpose, so as to insulate the openings of the ureters; the other, to divert it into the rectum. On account of the presence of complete epispadias, the latter would be the more feasible plan in the present instance. It is, in fact, nothing more than the operation of puncturing the bladder through the rectum, and it does not appear to be too sanguine a hope to entertain that that close approximation of the openings of the ureters might ultimately be attained, which would permit their conjoint termination in the rectum by the fistulous communication established. The subject, however, requires more mature consideration; and as the above case is yet under observation, if this idea meets with approbation, I shall venture to carry it into effect. For the present, the child experiences much comfort from the use of an ordinary umbilical truss, with a sponge attached to its lower circumference. The former supports the hernia, and the latter absorbs the urine as it escapes.

Accurate notes of the history of this case, by Mr. Odévaine, a pupil in the hospital, have been mislaid, and I have been unable to investigate the subject as much as I could wish. Whilst this communication was in type, I accidentally learned from my friend, Dr. Hutton, that some observations relating to it were to be found in the Lancet by Mr. Chance, of London. I have just looked over them in the second volume of that journal, for the year 1852. The details of the deformity are given most truthfully—the explanation advanced of the error of malformation is more than probable—and the remarks throughout are well worthy of perusal. I much regret I had not the advantage of an earlier acquaintance with them.

## COUNTY GALWAY INFIRMARY.

### *Cases of Ruptured Jejunum Intestine, the Result of external Violence; with Observations.*

BY CROKER KING, M. D., F. R. C. S. I.,
PROFESSOR AND EXAMINER IN THE QUEEN'S UNIVERSITY IN IRELAND, ETC. ETC.

On the 6th February, 1851, Michael Doyle was admitted into the County Galway Infirmary. Two days previous to his admission, having quarrelled with a fellow-pedlar, he received a severe kick in the abdomen. Felt very unwell from the moment he received the injury, but did not apply for hospital relief until severe vomiting had supervened.

When seen by me he was in the following condition:—Constant vomiting of a fluid of a spinach-green colour; no tension or hardness of the abdomen, but there was some tenderness on pressure being applied midway between the umbilicus and the crest of the right ilium. He lay with his legs extended, and made light of the injury. Pulse 76, small and weak; bowels had not been moved since the receipt of the injury.

Leeches, followed by poultices, were applied to the abdomen; mercurial ointment was rubbed in, and opium was administered internally. Under this treatment the vomiting ceased; and, in the morning, he expressed himself as much relieved; however, the pulse had increased in frequency, and diminished in strength, and the tenderness of the abdomen still existed. More leeches and poultices were applied, and the mercurial inunction was continued.

On the following day, when asked how he was, he replied that he felt much better; and on inquiring whether he felt any uneasiness in any situation, he struck his abdomen with his clenched fist to prove his freedom from pain.

That night vomiting of the same description of green fluid already described returned. Respiration was thoracic and embarrassed, and his hands and face became of a violet hue, the pulse imperceptible, and he rapidly sunk, and died on the morning of the 10th of February, five days and a half from the receipt of the injury.

*Post-mortem Examination twelve Hours after Death.*—No mark of external violence; not the slightest extravasation of blood in any of the superficial structures. On opening the abdomen the peritoneum exhibited evidence of the most intense inflammation; it was coated over with a layer of lymph a line in thickness, and the intestines were glued together. On further examination a large rent was discovered in the jejunum, about six inches from the termination of the duodenum; it engaged a third of the circumference of the intestine; the edges of the wound were much ecchymosed, and had become adherent to another coil of intestine.*

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* The preparation is preserved in the Anatomical Museum, Queen's College, Galway.

Patrick Quinn, aged 33, a man of intemperate habits, admitted into hospital 18th April, 1854, at ten o'clock, A. M.

On the morning preceding his admission, while in a state of intoxication, he fell from the edge of the Galway dock across the gunnel of a boat. Though evidently severely injured by the fall, he insisted upon taking an oar, and rowed for about a mile. The master of the boat perceiving that he looked ill, that he appeared weak, and perspired freely, sent him ashore.

On the following morning he was seen by a medical man, who directed that he should be sent to hospital.

On admission he was in the following state:—He lay with his legs extended; on being questioned, he complained of pain in the abdomen, which was increased by pressure, particularly when applied to the right of the umbilicus; his extremities were cold; his pulse very frequent, and so small and feeble as to be scarcely perceptible at the wrist; countenance not shrunken, but the surface of the body, especially his face and upper extremities, were of a mottled violet hue, as if the blood were imperfectly purified, though the respiration did not appear to be embarrassed further than being more thoracic than abdominal; there was constant vomiting of a fluid of a spinach-green colour.

Treatment same as in Doyle's case, namely, local depletion, mercurial inunction, and the internal administration of opium.

He gradually sank, and, retaining his faculties unimpaired until the last moment, he died at ten o'clock, P. M., twelve hours from the date of his admission into hospital, and thirty-six hours from the occurrence of the injury.

*Examination of the Body fourteen Hours after Death.*—Evidence of acute peritonitis, as in Doyle's case, but as the case had terminated in a more rapid manner, the lymph which lined the parietes and coated the intestines was less consistent; the jejunum was found to have been ruptured about eighteen inches from the duodenum; the rent was about the size of a sixpence, and was surrounded by a dark ecchymosed margin.* Some foreign matter, evidently a portion of the former contents of the jejunum, was found extravasated in the great *cul de sac* of the peritoneum.

The superficial structures did not present the slightest mark of external injury.

*Remarks.*—The above cases present many features in common. In neither instance was the injury immediately followed by an amount of suffering or debility sufficient to deprive the patient of the power of locomotion; for, in the case of Doyle, he walked home a short distance and sat at the fire the greater part of the evening, and Quinn was able to assist in rowing a boat.

In a medico-legal point of view, these facts are of importance, for it has been frequently deposed by medical witnesses, that an individual labouring under intestinal rupture could not possibly make use of any considerable exertion, or even walk a short distance after the receipt of so serious an injury. Now, although the particulars of several cases which have been published have proved these statements to be incorrect, still it is desirable that rare and peculiar occurrences should be made public, and besides I am not aware that there is any instance on record of an individual, suffering from ruptured intestine, having been able to perform so great a muscular feat, as to row about for upwards of a mile in the open sea, of a rough morning in the month of February.

Legal questions, of great importance to individuals and to the ends of justice, have frequently occurred in connexion with rupture of the abdominal viscera. I may be permitted to state a few circumstances connected with two cases which have fallen under my own observation. Some years ago, the coachman of a relative of mine spent the evening in company with a young woman, of whom he was considered to be an admirer; they supped together on oysters and porter; of the latter they both drank a considerable quantity. In the course of the evening it having transpired that the man was already provided with a wife, a quarrel ensued, and the woman received a blow in the abdomen from the coachman's knee, after which they parted in anger, the woman returning home a distance of about half a mile. In the course of the night she was suddenly seized with violent vomiting, succeeded by pain in the abdomen; the particulars of the quarrel were discovered; she died on the following morning, and the man was immediately arrested.

On examing the body, a large rent was found in the posterior surface of the stomach; the contents of the latter had been extravasated; and the resulting inflammation exhibited the usual appearances presented where death has occurred from acute peritonitis.

The general impression on the coroner and jury was, that beyond all doubt, the accused had caused the death of the deceased; however, I stated in evidence, that in my opinion it was extremely doubtful if the rupture had been caused by external violence, the fact of the woman having walked home after the receipt of the blow, the subsequent occurrence of vomiting, followed but not preceded by acute pain; all combined to make me refer the rupture to the violent action of an over-distended stomach, several instances of which are recorded by Taylor and Beck.

On this evidence the man was liberated.

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* The preparation is preserved in the Anatomical Museum, Queen's College, Galway.

The second case is also of some interest; the particulars of it can be found in the proceedings of the Dublin Pathological Society, before which body I at the time exhibited the morbid specimen.

A woman, complaining of what was regarded as gastrodynia, applied for medical advice, for which a mixture was prescribed. In the evening she took the first dose of the bottle; immediately upon swallowing it, she was observed to turn deadly pale; a cold perspiration stood upon her forehead, and in a few minutes she expired. The friends naturally considered that the woman had been poisoned, and an inquest was rendered necessary. I was deputed to examine the body. On my arrival, matters looked very unpromising; the room in which the body lay was occupied by several old crones, friends of the deceased; they sat round the bed clapping their hands, condoling with the relatives of the dead woman, discussing the probable nature of the poison which had been administered, and the villany of the doctor for trying his combustibles on a Christian.

An examination of the body immediately revealed the cause of death; the stomach was distended with blood, its posterior surface was the seat of a very large ulcer, the base of which was formed by the pancreas, to which the stomach had become adherent; the ulcerative process had extended to the splenic artery, from which the flow of blood that had suddenly terminated life had proceeded.

The jury were quite satisfied with the medical evidence, and brought in an appropriate verdict.

All present, with the exception of the old women before alluded to, seemed satisfied with the result of the investigation. The coroner, perceiving this, called over one of the women, and with much solemnity proceeded to detail to her the real nature of the case; he stated that the medicine which had been administered had no connexion whatever with the fatal result, but that the death of the deceased was caused by an ulcer or sore which had eat its way into a large blood-vessel. The woman listened with respectful attention, and then said, "Sure your worthy honor ought to know best, but she was a fine clever woman until she took the *poison*;" the woman and her companions immediately left the room, muttering as they went out that there was no justice for the poor.

Both the cases of ruptured jejunum were accompanied by an abundant discharge from the stomach of a spinach-green coloured fluid. I cannot say that I felt absolutely decided as to the source of this fluid. On the whole, I inclined to the opinion that it was vitiated bile, which antiperistaltic action on the part of the duodenum had propelled into the stomach. It is remarkable, in corroboration of this view, that this symptom was present in both of the cases in which the rents were situated close to the duodenum, but was absent in two other cases which fell under my observation, in which the injury was in the ileum near its termination, and consequently, from its distance, less likely to excite the duodenum.

In the eighteenth Number of this Journal, in an interesting article on the subject of green vomiting, Dr. Frazer states his opinion, that this matter is composed of blood in an altered and modified condition, and that the discharge is altogether of a hæmorrhagic character. In the present instances, the intestines did not contain any fluid resembling blood in a state of transition, and the extravasated blood which constituted the ecchymosis that surrounded the rent in the case of Quinn, had not undergone any change in colour. Although Dr. Frazer's views are ingenious and well worthy of attention from the profession, still additional observations are required before they can be accepted, or on the contrary rejected.

The absence of severe suffering in both these cases, in which the *post-mortem* examination revealed the existence of intense inflammatory action, is remarkable. Is the explanation to be found in the existence of a state of collapse, which blunted sensations which under other conditions would have been acute?

Another circumstance worthy of notice is that, in the above cases, and in another which I witnessed in 1838, while resident surgeon in the City of Dublin Hospital, that notwithstanding the patients having, a short time after the receipt of the injuries, fallen into a state of collapse, and the surface of the body having become cool, and the pulse so small as to be scarcely perceptible, yet this condition of vital depression did not appear to abate the violence of the inflammatory action.

The last circumstance in connexion with these cases, to which I shall direct attention, is, the complete absence of any even the smallest mark of external violence. No ecchymosis whatever, though assiduously sought for, could be detected.

In the administration of justice this fact is of some importance, for cases exist in the records of legal medicine in which a guilty party has escaped from punishment in consequence of its having been asserted, on what was regarded as competent medical authority, that an internal injury, sufficient to produce death, could not have resulted from external violence, because it was unaccompanied by ecchymosis.

Statements of this kind are now known to be erroneous; but a few additional cases, faithfully reported, are still useful; for it does appear strange—and if the evidence rested on the particulars of a small number of isolated facts, doubts might arise as to their authenticity—it appears strange that, in some instances so slight an injury as a trifling slap or pinch should lacerate the smaller blood-vessels, and produce a bruise; whereas under other circumstances, where the violence was apparently of much greater magnitude, no result of the kind should follow. For example: in a recent periodical* I detailed the particulars of a *post-mortem* examination on the body of a criminal whose execution I had witnessed. He fell through a height of seven feet and a half, with a fearful jerk, and yet the rope did not cause the smallest extravasation of blood.

Pathological eccentricities are interesting, and warn us to be cautious in drawing general conclusions from a limited experience. I should not desire to hear medical evidence given in an undecided and wavering manner: by such indecision I have frequently seen justice frustrated and crime triumphant; but, on the other hand, I have, in common with many other professional men, been disgusted by unbecoming flippancy on the part of an imperfectly educated medical witness, in cases involving not only liberty but life.

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## BIBLIOGRAPHY.

### *Abstract of a Report communicated to the Society of Medicine of Paris, June,* 1854, *on M. Devergie's "Practical Treatise on Diseases of the Skin."* By M. Bourguignon.

[Printed by order of the Society.]

Gentlemen,—The Practical Treatise on Diseases of the Skin by our honourable *confrère*, M. Devergie, of which I am about to give you a report, is one of those excellent works which bear on every page the stamp of sound observation, and which one reads with interest, as well as advantage.

This work is divided into two principal parts: the first treats of the general pathology of diseases of the skin; the second contains the description of them. I should be able, by following the plan adopted by the author, to bring before you certain generalizations, and afterwards to pass on to the description of the groups of each particular disease; but I prefer taking another course, that is to say, I would wish first to speak of the descriptive part, and to conclude with the generalizations which have been the consequence of these.

Before writing his book, M. Devergie sought for a rational, philosophical, and sound method, so as to form some rule for the division of his nosological table.

He has cast a glance at the classifications of his predecessors, and from this he has rightly concluded, that Plenck, in dividing skin diseases into thirteen classes, according to their elementary morbid form, has complicated too much these groups of disease, and that he has assumed as elementary forms, affections which were sometimes secondary.

He has laid the same charge against Willan, although the English author reduced the different classes of skin diseases to the number of eight.

He has justly praised Alibert for having taken as the foundation of his division, the analogy which the different diseases have for one another.

For indeed, according to Alibert, papulæ, bullæ, and scales, properly so called, are no longer to be considered sure characteristics of any family of skin diseases.

The classification of Alibert, although less favourable in a diagnostic point of view, was more rational as regarded treatment.

M. Devergie approves of, without adopting, the opinions of M. Baumes, of Lyons, which I may say, *en passant*, are ours also. We have, in fact, with some slight variations, thought and written as M. Baumes, to the effect that whatever may be in general the form under which a cutaneous disease presents itself, it arises from the irregular exercise of the vital functions, which at the present day, we can only attribute to some unknown morbid force.

M. Devergie has been able, without much loss, to pass over in silence the classifications laid down by the German authors; among others, by Hebra of Vienna, and Simon of Berlin; since here he would not have found the elements of a good arrangement.

All the pathologists who have attempted to make a division of cutaneous affections, starting from some general principles applicable to all the known forms, have failed, because they have found it impossible to arrive at the causes of which the eruptions are merely the symptoms.

Some, in fact, observing that the skin, in certain cases, may be affected without any disturbance of the general functions, and by external agents, have taken, as types of disease, the mere apparent forms, as exanthemata, vesicles, bullæ, &c.

Others, and M. Devergie among the number, taking into consideration the general condition of the patient, his temperament as well as the seat of the disease, and the rarity of its occurrence, have divided lesions of the skin into the scrofulous, cachectic, those of the scalp, exotic, &c.

M. Devergie, by overturning some of the received ideas as to this class of diseases, and by introducing doubt into the minds of many persons, will make them feel the necessity of finding some other criterion as a guide to classification, and in this manner he will contribute to our advancement in this department of medicine.

Be that as it may, however, our *confrerè* has divided the skin diseases, which he has himself described, into twelve groups, viz.:—1st, exanthematous affections; 2nd, vesiculæ and bullæ; 3rd, pustular diseases; 4th, cachectic; 5th, papular; 6th, scaly; 7th, exotic; 8th, scrofulous; 9th, those of the scalp; 10th, those of the nails; 11th, accidental productions; and 12th, syphilitic.

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* Dublin Quarterly Journal of Medical Science, No. XXXV., August, 1854, On Death by Hanging, by Croker King, M. D., p. 86.

This classification is in truth as good as any other, although it makes it necessary to treat many times of the same disease; thus, for example, eczema, impetigo, ecthyma, studied amongst the groups of vesicular and pustular diseases, are a second time found among the affections of the scalp; this, however, we repeat, is a detail of minor importance.

It does not displease us to see the itch driven from the group of vesicular diseases to take its place amongst the papular. At last, no doubt, it will be ranged amongst the number of parasitic diseases.

M. Devergie excels in describing the various pathological forms that the anatomical elements of the skin assume. We would mention, among others, as having particularly attracted our attention, his description, amongst the exanthemata, of pellagra; amongst the vesicular diseases, of eczema, which sometimes assumes a hybrid form; of herpes zoster; and of chronic pemphigus, a complaint that never quits those who are unfortunate enough to be attacked by it.

The author has treated with particular care of rupia among the cachectic affections, and of the itch among the papular; he exposes, at great length, the reasons which induce him to believe in the *spontaneous generation* of acari; he believes, in short, the presence of the insect to be the result of disease, and that we have, up to the present day, mistaken the cause for the effect.

This pathogenic doctrine is, in our eyes, of very great importance; it is my intention to treat of this subject more fully afterwards.

In the sixth group we shall mention the description of psoriasis, where there will be found a notice of the different modes of treatment, compared with that by means of arsenic; in the eighth group we find the scrofulous diseases which the author attributes to a degenerated and transformed syphilitic taint, and which, although somewhat removed from the special field of dermatology, will be read with veritable interest. Among the affections of the ninth group I will quote tinea or favus, which has been abandoned almost exclusively to the medication of empirics, inasmuch as, in July, 1853, a peasant, who devoted himself, in his native village, to the cure of this disease, showed to M. Bazin the means of treating it by depilation. The twelfth group contains the chapter on syphilitic diseases, in which the author expresses his opinion on a subject much disputed, viz., regarding the characteristic form of the primary, and the contagiousness of the secondary accidents.

Such is a brief sketch of the descriptive part of the work. I would gladly dwell longer upon it, but I prefer fixing your attention on the chapter which treats of the general pathology, which seems to me to be the most excellent part of the "*Practical Treatise on Diseases of the Skin.*"

M. Devergie expresses his astonishment at the isolated position which the diseases of the skin still hold in reference to affections of other organs.

He observes, that the diseases commonly known under the name of herpetic affections are, in every respect, identical with similar inflammations of other tissues. He attributes their origin to the same cause, and assigns to them the same progress and termination; he does not seek for an explanation of the disease in any morbid element peculiar to itself, nor in any specific virus, but in the temperament of the subject, his constitution, hereditary tendency, climate, moral causes, privations, and former diseases; in a word, M. Devergie conceives that the pathology of the skin does not differ from the pathology of other tissues and organs, except in the varied form of its morbid productions. Accordingly to him, the morbid elements and causes are identical, and, consequently, there ought to be a close similarity in the therapeutics of these and other diseases.

In order to prove that his doctrines are well founded, he lays down the following general principles:—

1st. That the generality of diseases of the skin have a certain morbid inflammatory character, such as is seen in the greater number of the diseases affecting the various tissues of other organs in the economy.

2nd. That the diseases of the skin may be produced by all the causes which give rise to diseases of other tissues or organs, as physical, moral, and hereditary causes, climate, temperament, constitution, &c.

3rd. That the diseases of the skin follow in their progress the same course, and present the same termination, as the diseases of other organs.

4th. That if the morbid forms met with in cutaneous diseases are very varied, it is because the tissue of the skin is the most complex of all the tissues in the economy.

Then there follows the enumeration of some diseases due to each of these orders of causes.

The treatment is dwelt upon with particular care, and is inferior to nothing which has ever been written on the subject of therapeutics. In the treatment of cutaneous affections the author wishes to keep in view the disease itself as well as the phenomena that it developes, their cause, and, above all, the temperament of the patient; for certain morbid forms are always connected with certain temperaments, and each temperament demands a peculiar plan of treatment.

On the subject of therapeutics he successively treats of the following:—

A. Of the antiphlogistic treatment.
B. Of the antilymphatic treatment.
C. Of the antipapular treatment.
D. Of the antisquamous treatment.
E. Of the mixed or compound treatment.

These considerations on the subject of therapeutics are concluded by an excellent article on baths in general.

*The antiphlogistic treatment* comprises bleeding, emollients, and purgatives, from which it is necessary to abstain in the treatment of rupia and pemphigus; resolvents, in solution, as acetate of lead, nitrate of silver, alum and corrosive sublimate; and in pommades, as oxides of zinc, tannin, camphor, chloroform, &c.

*The antilymphatic treatment* comprises bitter preparations, and such as are of an antiscorbutic nature, as the chlorides of barium, of gold, or of calcium, preparations of iron, and cod liver oil.

*The antipapular, or antinervous treatment,* comprises alcaline preparations in baths, drinks, and pommades; the doses of the subcarbonate of soda and of potash are remarkably diminished in comparison with the formulæ generally adopted. Amongst the alcaline waters those of Loueches, Vichy, Neris, Bourbon-Lancy, deserve a preference, especially in reference to chronic lichen. This mode of treatment also comprises the local use of chloroform, camphor, &c., so efficacious in complaints attended with much itching, and also tincture of cantharides, given in doses of one drop night and morning, gradually increased to ten drops.

*The antisquamous treatment* consists of the arsenical preparations so useful against psoriasis. M. Devergie lays much weight upon their administration, not only in this variety of diseases of the skin, but in a number of other affections, equally chronic and rebellious to treatment. In theory, and according to the idea that we have ourselves formed of the primary causes which remotely produce diseases of the skin, the use of arsenic seems to us to be valuable in exactly the same way that the preparations of iodine and mercury are of use against the syphilitic affections of the skin. Certain cases in which the rebellious eruptions of the skin alternate by metastasis or by repercussion with diseases of the stomach and of the womb, have very much arrested our attention, whilst the curious articles published by all the press concerning the arsenic-eaters have caused us to make some reflections on the administration of such preparations. In fact it is with the most lively interest that we treat of the therapeutical and physiological effects of arsenic. And if it be true, as the assertions of Dr. Tschudi do not permit us to doubt, that the inhabitants of Southern Austria, Styria, and the Tyrol, often make use of arsenic in comparatively large doses, in order to produce an appearance of freshness and *embonpoint,* and to facilitate the functions of respiration; and if it is equally incontestible that the breeders of horses and oxen give it to these animals in order to excite in them the power of getting fat, and to give fineness to their coats, we can better understand the good effects of arsenical preparations in the scaly affections. Arsenic will, no doubt, after these recent publications, have its period of fashion, but assuredly it will always remain as a valuable remedy against a great number of cutaneous diseases hitherto considered incurable. M. Devergie refers to the action of arsenious acid, which has been found much less beneficial than that of the arsenites and arseniates; and it is important to bear this in mind in the administration of so poisonous an agent.

He was the first to observe a brown discoloration of the skin, named *arsenical spots,* when this drug is pushed to saturation.

*The mixed or compound treatment* is chiefly recommended in syphilitic affections; it principally consists in a solution of two and a half drachms of iodide of potassium in fifteen ounces of water, of which a teaspoonful is to be taken night and morning in a cup of sudorific infusion. An hour after, M. Devergie administers corrosive sublimate in the form of a pill, with extract of opium.

He sometimes orders a syrup, containing

Iodide of potassium, ʒijss.
Corrosive sublimate, gr. i. to iss.
Thebaic extract, gr. iij.
Syrup, ℥xv. M.

This mixture he prefers to the association of iodide of mercury with iodide of potassium, so as to form hydriodate of mercury, for in this case it is an error to suppose that any notable dose of iodine is administered.

In the scrofulous syphilis he gives the cod-liver oil, the syrup of iodide of mercury, and afterwards iron. For tertiary symptoms, he adds an arsenical preparation, Fowler's solution, in doses of from one to ten drops. In those skin diseases which are essentially scrofulous, he recommends cod-liver oil, wine of gentian, syrup of the iodide of iron, all mixed together. In lupus he gives cod-liver oil in doses of eight to ten teaspoonfuls every day.

I wish to draw attention to this plan of associating together these medicaments, which are in general administered separately, because this fact shows the peculiar tendency of our author's views; we know that he believes in the compound forms of diseases of the skin; he continues faithful to this principle in their treatment.

A chapter upon baths, and that by no means the least instructive of the work, completes the part devoted to treatment. Baths act in various ways, owing to their composition, their temperature, and the length of time the patient is subject to their influence; and in the douche bath by the violence of the jet; thus the douche with a single jet is best suited for neuralgia, that with many jets for paralysis.

The vapour baths are made the subject of a minute and interesting description; they act by the production of pulmonary and cutaneous perspiration.

They ought to be, in diseases attended with secretion, of a temperature of about 35 degrees *cent.* when the patient enters; afterwards they should be raised to 38, 40, or 42 degrees. In rheumatism the temperature ought, on the contrary, to be carried from 50 to 55 degrees, because in this case it is necessary to excite the skin more powerfully. A vapour bath should not last more than from 20 to 25 minutes; when it causes palpitations, it is because the temperature is too high. In certain cases, two or three shower baths of comparatively cold water may be given with excellent effect, especially in the cutaneous affections of the face. When a Russian bath is administered, the vapour is raised to 55 degrees, and cold douches are administered every five minutes.

The vapour baths do not disturb digestion; it is preferable that they should not be given when fasting.

M. Devergie gives us very precise ideas as to the description and treatment of diseases of the skin; we sincerely thank him for his laborious efforts, and desire that he may receive a suitable recompense.—*Revue Médicale, July,* 1854.

(*To be continued.*)

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## EXTRACTS FROM BRITISH & FOREIGN JOURNALS.

### *Case of Punctured Wound of the Thorax, in which the Pleura and Pericardium were both opened, while the Lung and Heart remained uninjured. By* JOHN MACEWAN, Jun., M. D., *Glasgow.*

I conceive that I am perfectly justified in calling the following a rare and interesting case, when I state, that upon carefully examining the able lectures upon injuries of the chest, by Mr. Guthrie, I do not find a single case similar to that I am about to relate; in other words, a single case of puncture of both the pleura and pericardium, without penetration of the lung or heart. Taking this fact, then, into consideration, and remembering, at the same time, that "wounds penetrating the walls of the chest, and implicating any part or portion of its cavity or contents, are among the most dangerous of injuries, and require in their treatment a more careful attention and a greater extent of knowledge than most others which befal mankind," I feel fully warranted in recording the present case.

On the evening of April 26, 1853, about ten o'clock, I was called suddenly to C. R., residing in H—— street. She is about six years of age, tractable, but rather of a bold temper. She has complained occasionally, when excited, of palpitation of the heart; and the cause of this is referred by her mother to a fall she received out of bed when a child.

When I arrived, I found that she had received a very severe wound of the left side of the thorax, about one inch and a half in length, extending from the left edge of the sternum, nearly to and a little above the nipple, and situated between the second and third ribs; this wound was pretty deep, and at least implicating the pleura, if not the lung, as was quite evident by the difficulty of breathing, and by the fact, that during every act of inspiration the edges of the wound were projected forwards, while during every act of expiration they were sucked inwards. From the position of the wound, the manner in which the heart has escaped from being penetrated is almost miraculous. This may, however, be explained from the manner in which the bottle may have struck the chest; for, instead of having struck it directly or projected downwards, it may have struck it with its cutting edge projecting upwards, and thus left the heart untouched, and saved the child from instantaneous death. (I beg leave to state, that these are the daily notes taken during the progress of the case.)

The manner in which the wound was received was the following:—When crossing the street with a bottle of beer in her arms pressed towards her breast, something, it is supposed, had tripped her, and she fell, and the bottle breaking struck her upon the thorax at the part above-mentioned, making a clean cut of her frock, shift, &c., &c. Although, from the appearance of the clothes and of the house, the hæmorrhage had been very great, by the time I arrived it had almost ceased; so that, after finding, by a very slight examination (the nature of the wound preventing a more minute one), that no glass, &c., was imbedded in it, I brought the wound together by means of two stitches, adhesive plaster, compress, and bandage. I then had her put to bed, enjoined perfect quiet, and left the house. I may state that she vomited a little after being put to bed.

I had not, however, been home fifteen minutes, when a hurried message came, that hæmorrhage had again taken place, and that my services were consequently required immediately. Accordingly, I again repaired to the house, accompanied this time by my father. When I arrived, I found, from the state of the bed, &c., that the hæmorrhage had been pretty severe, although it was again completely stopped. We immediately removed the plaster, &c., and, using the same precautions as formerly, re-applied the compress, which had the happy effect of preventing further hæmorrhage. We had her again put to bed, ordered some one to watch her all night, and to give her a little gruel or tea if she inclined for either. I may state that her breathing is, of course, more difficult than usual, though not to such an extent as one would imagine. Of course, from the hæmorrhage, her pulse is very feeble, and her countenance altogether anæmic.

April 27, nine A.M.—This morning C. R. is very favourable.

28th.—C. R. was ordered to-day some castor-oil, which had the effect of removing a quantity of dark fæces. As yet she has expectorated no blood; so that I hope the lung has not been injured, as I had at first feared was the case. (This is the statement made in the report, and the correct nature of the diagnosis will be proved by the *post mortem* examination shortly to be related.)

30th.—She has progressed favourably. To-day, however, she is of a very sallow complexion. Her pulse is 120, and very compressible. She complains of pain in her left arm, and of difficulty in moving it. To-day, for the first time, the dressings were removed; the wound has nearly united; there is no puffy feeling nor inflammatory blush around it. The respiratory murmur around the wound, as heard by the stethoscope, is almost natural. The breathing is still slightly laborious. The wound was dressed again in the same way. Quiet was particularly enjoined, and beef-tea, arrowroot, &c., recommended.

May 2 (six days after the occurrence of the accident).—Wound dressed again to-day; stitches easily removed; it has almost wholly united. Pulse about 100, pretty full, not so compressible as formerly.

9th.—Has been dressed regularly; and, with the exception of slight pain over the region of the wound, everything has progressed very favourably till to-night, when I was suddenly called to see her on account of the very large quantity of yellow serous (I cannot almost call it purulent) discharge which has taken place; the dressings were removed, and again applied, a piece of lint being placed over the opening, and a strip of plaster over this.

10th.—The discharge is still continuing, and cough is very annoying. Accordingly we ordered:—

℞ Sol. mur. morph. ʒss., syr. simp. ʒiiiss., syr. scill., ℥ss., aq. cinnam. ℥i. M. capiat cochleare parvum tussi urgente.

12th.—To-day the cough mixture was repeated, tinct. opii being prescribed in place of the sol. morph., in consequence of the bowels being rather loose.

15th.—Wound has wholly closed, with the exception of a part about the size of a fourpenny-piece, through which the discharge still continues to flow very abundantly. To-day the breathing is more laborious than usual.

17th.—To-day the discharge from the wound is more decidedly purulent, and she complains very much of pain when pressure is made on the right side of the thorax at its lower part; and here there is evidently prominence. Her pulse is 120, wiry; her apearance very anæmic.

To-night, about eight o'clock, Professor Lawrie met me in consultation. The chest was found to be pretty clear, and the usual respiratory murmur was distinctly audible at every part, with the exception of one portion posteriorly immediately behind the wound, where a very distinct crepitus was heard. Dr. Lawrie, of course, considers the case very dangerous, and fears that all that can be done is to support the patient's strength by wine-negus, and to ease the pain and counteract the inflammatory action by a small blister applied on the right side, where she complains of pain, and by small frequently repeated doses of mercury and opium. The blister was accordingly applied, and the following prescribed:—

℞ Pulv. Doveri gr. xij.; pulv. cret. c. hyd. gr. vi. M. et div. in pulv. vi. quarum capiat unam sextâ quâque horâ. She was at the same time ordered to receive occasionally a teaspoonful of wine in two teaspoonsful of warm water and sugar.

18th.—No change observable.

19th.—To-day the powders have been repeated.

20th.—She is much weaker, and is evidently fast sinking. Her pulse is feeble and intermittent; she will take no support, not even the negus.

21st.—The discharge is not so great as formerly, but a very loud whizzing sound, as of a bird whistling, is emitted at the wound, while very noxious gases are constantly being poured forth. All round the wound, in front, the stethoscope discloses loud crepitation. Pulse not so intermittent as formerly.

22nd.—To-day there is little or no discharge, and she is herself more quiet and contented, so that we made a very gentle examination of the wound by the probe; and, on directing it downwards, the heart is felt distinctly at every beat to tilt the probe upwards; and the sensation given by the probe to the hand is not as if the probe were resting upon the heart covered by the pericardium as a bag, but as if it were resting upon and tilted up by the body of the heart itself. And not only so, but when the child is placed in such a way as to allow the light to fall upon the wound, the movements of the heart are easily observable through the wound. This leads us at once to the supposition, that while the pleura, without a doubt, has been injured, the pericardium also has been injured.

23rd.—C. R. is rather easier, but still very weak; discharge has again made its appearance, while, at the same time, an inflammatory blush has presented itself all round the wound. Her appetite is very bad; accordingly we prescribed:—

℞ Sulph. quin. gr. x.; acidi sulph. aromat. ℨi.; aq. puræ, ℥iss. M. capiat cochleare parvum ter in dies.

June 1.—The wound is much enlarged since last report. Discharge still considerable. A portion of the third rib, which has evidently been grazed by the glass during the fall, is undergoing the process of ulceration. The wound is being dressed twice daily, and the disgusting odour of the discharge removed by impregnating the cotton which covers the wound with a solution of chloride of lime. The sputa are pretty considerable, and consist of thickened mucus, mixed occasionally with a little blood.

3rd.—She is much weaker, though still perfectly sensible. This evening, about six o'clock, C. R. died, exactly thirty-eight days after the occurrence of the accident. According to her friends' statements, she seemed to be in great agony before her departure.

*Sectio Cadaveris twenty Hours after Death.*—On removing the skin, cellular tissue, and superficial muscles of the thorax, we found the cartilage of the third rib very much hollowed out by ulceration. On opening the thorax, in the usual way, we found that the pericardium had been penetrated by the bottle, and communicated with the wound, and that it had undergone severe inflammation. The opening in the pericardium was of an oval shape. It was from three-quarters of an inch to one inch in length, and about a quarter of an inch broad. It had evidently been smaller at first, but enlarged by ulceration. The pericardium was thickened to a very great extent, and its two surfaces were firmly adherent at many portions, and on separating these adhesions the surfaces of the pericardium were found to be very rough, and to exhibit the appearance called "stalactites," from the deposition of fibrin. Some bloody serum was found in the cavity of the pericardium. The interior of the heart was perfectly normal. The pleura of the left side also was penetrated. It had undergone very severe inflammation, and was much thickened. Firm adhesions had been formed at many parts, and a good deal of bloody serum was effused into its cavity. This refers not only to the left, but also to the right pleura, showing that inflammation had extended from the one pleura to the other, as we had suspected. The lower portion of the upper lobe of the left lung, or that lobe exactly opposite the wound, was very much congested. It had a very liver-like appearance, and sank when thrown into water. The same remarks hold true with regard to the lower lobe of the right lung, showing that in both instances inflammation had attacked the lung as well as the pleura. This is what usually happens. Pleuritis and pneumonia are, according to Guthrie, rarely met with separately after wounds of the chest, and more particularly the latter, without implicating the former, constituting what has been named "pleuro-pneumonia." The other portions of both lungs were perfectly normal. No tubercles were observable. The other organs were perfectly normal as far as was examined. The gall-bladder was gorged with bile. The mesenteric glands were in no way enlarged. The *post mortem* examination, therefore, I repeat, was very satisfactory, and showed that our diagnosis was tolerably correct, and our treatment perfectly judicious.

*Remarks.*—In the consideration of the case, one almost wonders how both the lungs and the heart could have escaped being punctured, seeing that both the pleura and the pericardium were opened. All that we can say is, that such was the fact. In the consideration of this case, also, a question presents itself,—Of what did the child die? And to this question, I think, there can only be one answer, viz., of debility, induced partly by the small quantity of diet taken, but more particularly induced by the large quantity of discharge daily being poured from the wound, and consequent upon the pleuritis and pericarditis which followed the occurrence of the accident. In all probability, the pneumonia present, though it had not proceeded far in its course, likewise contributed its share to hurry on the fatal issue. Another circumstance worthy of remark in this case is, that neither collapse of the lung nor pneumothorax followed the occurrence of the accident. Some writers would maintain, that there can be no such thing as puncture of the pleura without collapse of the lung and pneumothorax following as a consequence. Now, this case shows, at least, that if these pathological changes follow puncture of the pleura in some, they do not follow it in all cases.

With regard to the treatment, it may be said by some, Why not bleed freely at first? To such I would answer, Consider the circumstances of the case. Here was a girl six years of age, not very stout, who received a severe wound of the thorax, in consequence of which severe hæmorrhage occurred, who, when I was called, was perfectly anæmic,—I ask, Who would dream of bleeding in such a case? The blister applied, and the mercury and opium afterwards administered, were all that the case warranted. But I am met at once by the objection, that many of our best authorities recommend bleeding, in order to counteract the inflammatory attack which is apt to supervene. I grant that they do; but in reading some of their cases, one is almost in doubt whether the patient died of the cure or the disease. And I assert that to have bled C. R., in the circumstances in which the report of the 26th April proves her to have been placed, I would have considered the extreme of bad surgery.—*Medical Times and Gazette, October* 14.

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## EXTRACTS FROM THE RECORDS OF THE BOSTON MEDICAL SOCIETY.

*Needles penetrating the Knee-Joint.*—Dr. J. MASON WARREN related three cases. The first was a child of scrofulous habit, five or six years old, who, while kneeling on the floor, had a needle penetrate and break off in the knee-joint. It was of large size, larger than the ordinary darning-needle. Dr. W. was called out of town late in the evening to see this child in consultation.

On examination, a small aperture could be distinguished below and to the inside of the patella. The leg was flexed on the thigh, and fixed in that position, so that it could not be extended. Dr. W. thought that the needle had penetrated between the two condyles of the femur, and was fixed there, and that it was broken off in the joint, as nothing could be felt of it externally. He advised, however, that a dissection should be made as far as the capsule, but to abstain from going further unless it could then be detected.

This was done, but nothing found. The question then arose whether the limb should be left in the position in which it was fixed. Dr. W. advised strong flexion and extension to be made, so that in case the body was lodged in the way he supposed, it might either be dislodged or else plough up for itself a cavity in the cartilage on the head of the tibia. By these measures the motions of the limb were restored. The child was kept perfectly quiet for a few weeks, until all inflammatory symptoms had subsided, after which he walked about without inconvenience.

This patient died of phthisis some years subsequently to the accident, and on examination of the knee-joint, the following was the appearance: The needle, as had been supposed, was firmly lodged between the condyles of the femur; it was somewhat corroded; and, from the motions of the joint, it had worn and maintained for itself a passage, so as not to interfere with flexion or extension. The joint itself was otherwise healthy.

The second case was that of a child six years old. In the summer of 1853, a needle, which was sticking in the window-seat, got into the knee-joint. It was immediately withdrawn, and the child, not suffering any pain, was allowed to use the limb. A few days after, severe inflammation came on in the wound, and a fungus shot out. At this period, Dr. W. was called to see the patient. The joint was found to be in a very tender and inflamed condition. On flexion, a quantity of pus ran from the wound, which was surrounded by a fungus of the size of a five-cent piece. Entire rest, with a splint, was enjoined, and the fungus was touched with caustic, causing at each application an increase of inflammatory trouble. After four or five weeks' treatment, the case finally terminated favourably. The needle had entered just on the inner side of the ligament of the patella.

The third instance was observed in a child of five years. Kneeling down on the floor in front of a bureau, to get something from underneath it, a needle, which had been engaged in the carpet, ran into the joint, and broke off therein. When seen by Dr. W. with her physician, Dr. Ball, the limb was painful on motion, somewhat swollen, and the child could not walk. By making strong flexion, a hard substance could be felt below the patella, on the inside of the joint, giving to the touch the sensation of some large body like a nail.

The patient being etherized, a dissection was made through the skin and fat until what appeared to be the capsule of the joint was reached. Within this, the foreign substance was felt firmly imbedded. The nails of the two fore-fingers were now pressed against it on each side, causing it to project through the capsule, when it was seized by the forceps. It was now found quite difficult to extract, and this was only done after a number of efforts, and by working it laterally, thus disengaging it from the bone. A splint was directed, with applications of cold water, and care in diet; her physician promising to give information if any symptoms requiring attention should present themselves.

*Unusually persistent Hæmorrhage.*—Dr. STRONG reported the case. J. G., forty-three years of age, a carpenter by trade, for several years had used spirits freely, but for three or four past years had been temperate; for at least twenty years has been subject to epistaxis, especially during the summers, as long as warm weather continued; he usually bled twice every day, at noon and at night; the amount of blood lost was often large, and the bleeding was arrested with difficulty. For about the same length of time that this hæmorrhage had continued, the patient has been subject to cough, accompanied by copious expectoration; and, within a year or two, there came on slight occasional hæmoptysis, which was easily stopped by draughts of salt and water; recovering from these attacks, he would return to his occupation as usual. Within the above-mentioned twenty years, he has had several severe fits of illness, which were called "bilious" attacks; his skin has been more or less yellow for the whole period; for about twelve years he has been dyspeptic; his food often oppressed him; he was an unusual small eater, his favourite food being fresh meat without salt; half a pigeon sufficed him for an entire day. His last illness was of twenty-one weeks' duration, reckoning from his first calling medical aid; but for more than a year previously he had not his usual health. His last attack was catarrhal, with frequent cough and copious expectoration. After about eight weeks he so far recovered as, on the 7th of December, to go out into the open air for a walk, the midday being sunny and pleasant. Soon after returning from his walk he began to bleed from the lungs, and Dr. S. was summoned. Before his arrival, however, the hæmorrhage had ceased; about a pint of blood, by estimate, having been lost. A somewhat superficial examination of the lungs (Dr. S. fearing to excite a return of the bleeding) detected no signs of a cavity or of any marked disease of the lungs. The most usual symptoms were shifting pains about the chest and shoulders, with a sensation of congestion, more permanent in the præcordial region, attended by stricture, as if a cord were tightly drawn around him; and this latter feeling was at times excessive, especially immediately before an access of bleeding. He could, at such times, hardly raise himself erect, but leaned forward, with an effort to respire. On examination, the liver was found to occupy an unusually large space, and was uncommonly prominent and firm to the touch at the pit of the stomach; tender, and even sore, upon pressure being made. From this time, by his own report, there were twenty recurrences of the hæmoptysis and seventeen of the epistaxis; these usually, but not always, *alternating*. Pulse between 60 and 70 per minute; full and hard previous to the hæmorrhages, and did not lose this character, even immediately after them, until within a few days of his death. When about to bleed from the lungs (which he could foretell with great accuracy) he had increased sense of stricture about the base of the chest, with more pain, and that always concentrated in the side of the thorax from which he apprehended the flow of blood. There was usually much febrile action and great heat in both the back and front chest; the bleeding continued until the local and general symptoms subsided; relief being very marked; appetite, lost just previous to hæmorrhagic attacks, would in the intervals return. These symptoms and their relief thus alternated without any special difference. At one time, while the patient was complaining of severe pain in the chest, Dr. S., on auscultation over the spot, heard a distinct crepitous rale, which, after the subsequent hæmorrhage, had disappeared. Seemingly a transient inflammation was established, which, at a certain stage, was uniformly relieved by the natural bleedings. Epistaxis was preceded by pain in the head and nose, with a feeling of fulness and of heat in the nostril from which the blood was about to flow; in *these* bleedings, the first discharge was of a dark colour, but soon it became florid red, with increased sensation of heat. From the lungs, the first flow of blood was rather dark, but in a short time it was of a bright vermilion; occasionally (and more particularly in the first bleedings), the blood was diffluent, and remained fluid; but in the latter attacks it coagulated firmly. There was but one discharge of blood *per anum;* this he himself referred to the fact of having felt much of it run into his throat during epistaxis, and to his swallowing the same. The blood from the lungs was of a bright arterial hue, and, mixed with a frothy mucus, came away after coughing, and did not immediately coagulate. The last recurrences of bleeding were on the 10th inst., when it lasted sixteen hours; on the 12th, about twelve hours; and on a few days subsequently, a small quantity. Death took place on the 23rd of February.

The patient undoubtedly bled from some general constitutional cause; the vital force being depressed in connexion with, or perhaps wholly dependent upon, disease of the liver and a diffusion of the bile through the circulation.

The treatment was various; an effort was made to relieve the system from the bilious derangement, but unavailingly; astringents in great variety were also employed without the least apparent benefit; strict diet, with a like result; leeches, blisters, issues were all tried without the least good effect. The bleedings would recur with nearly the same intervals, whatever was done. After very copious hæmorrhage, the interval was somewhat longer between two attacks. The patient's family estimated the amount of blood lost at more than two gallons; there were about forty recurrences of hæmorrhage, and the quantity lost was rarely, if ever, less than a gill at one time, usually being much more. Remedial measures being found of no avail, they were finally abandoned, and a generous diet was allowed. Towards the close of his life, the mind wandered; a comatose state succeeded, and persisted for about two days, when death took place.

*Autopsy, five Hours after Death.*—Rigidity slight. At apex of right *lung*, posteriorly, was a small cavity, as large as a shagbark, containing pus, and in its immediate neighbourhood were a few small, opaque, tuberculous masses. In the same lobe, anteriorly, there was a mass of dense, white, or grayish-white tissue, occupying about the space of a cubic inch, and having very much the appearance of diffused, gray, semi-transparent tubercles. The remainder of this lung, as well as the left lung, was considerably congested, especially in the posterior portions. There were slight adhesions of both lungs in front, and exceedingly firm adhesions of both lungs behind. Two or three ounces of serum in each side of the chest. *Heart* normal; left side contained considerable liquid blood, which soon coagulated. About four ounces of clear serum in pericardium; no adhesions. *Liver* large, dense, and firm; studded and filled with small nodules of yellowish-white colour, probably tuberculous. Gall-bladder and bile natural. *Spleen* quite soft and friable; *stomach*, *kidneys*, and other organs healthy. There was some clear serum found in the peritoneal cavity, but no injection of vessels, and no adhesions. The blood which escaped from the heart, as mentioned above, as well as that which escaped in removing the lungs, was at first unusually liquid, but soon coagulated. No appearance of paleness in any organ, as if from loss of blood.

*Double Self-adjusting Stethoscope.*—Dr. Bowditch introduced to the notice of the Society a new stethoscope recently invented by Dr. Camman, of New York city. Dr. B. said that heretofore he had no belief in any one form of stethoscope being much better than another. Dr. Williams, of London, had long since suggested a form, constructed on scientific principles, which, in Dr. B.'s opinion, was a *shade* better than any other, until Dr. Camman's was presented to him. Between the value of Dr. Williams's and of Dr. Camman's no comparison could be made. The instrument constructed under the direction of the latter gentleman *intensifies*, to an extraordinary degree, every sound heard in auscultation. For instance: the puerile respiration of a child seems almost like the rushing of a whirlwind. One scarcely believes his own senses at the first inspiratory act that is heard. In cases where the healthy respiratory murmur is very quiet, perhaps scarcely recognizable by the naked ear, or when examined by Dr. Williams's stethoscope, it becomes quite manifest while using Dr. Camman's. So with morbid sounds. Dr. B., although he had very recently received the new instrument, and was consequently but little accustomed to its use, had been able to discover râles and rubbing sound, only recognizable after the closest attention by the ear alone, and that too after their presence had been ascertained by means of Dr. Camman's apparatus. The reasons for this intensity of sound appeared to be chiefly two: 1. Both ears of the observer are acted upon at once. 2. The ear-pieces of the instrument, fitting tightly into the meatus of both ears, all *external* sounds are more thoroughly cut off, and the mind of the auscultator is thus forcibly drawn to the phenomena taking place within the thorax. By this instrument, moreover, the much mooted question, whether the column of air, or the material composing the stethoscope, conveys the sound, is decided in favour of the column of air. The proof this consists in the following facts: 1. Dr. C.'s stethoscope consists of no less than *five* different media, viz., ebony, an elastic tube lined with metallic wire, metallic tubes, and finally, ivory ear-tubes. According to all acoustic theories, such a variety of media should not transmit sound as well as a more homogeneous substance. 2. Dr. Camman, by experiment, found that when the base of his stethoscope (i. e. the bell-shaped portion that rests upon the chest) was made solid, *all sound* was lost. Dr. B. concluded by recommending the new instrument to the candid examination of the members of the Society.

*Tumour of the Upper Maxillary Bone; Excision.*—Dr. J. Mason Warren exhibited a specimen in which the whole maxillary sinus was occupied by a tumour of fibro-plastic appearance. Towards the angle of the jaw the tumour had made its way out of the sinus by an opening, and insinuated itself under the zygomatic process, being firmly attached to the external part of the jaw at that point. The history of the case is as follows:—

The patient is twenty-one years old, and has just graduated from college. Many years ago he had the last molar tooth in the left upper jaw extracted. Nine months since, after a fortnight's pain in the face, a small tumour appeared at the edge of the jaw, whence the tooth had been removed, which ulcerated and extended. In July, an operation was performed to remove the posterior edge of the jaw, with the disease, but the wound never healed. Lately, the front part of the maxillary sinus had been projected forwards, making quite a prominence on the cheek. The eye was slightly protruded, and the sight somewhat impaired. Within two months, a large ulceration, or perhaps it ought rather to be called a tumour, occupied the posterior part or angle of the upper jaw; its edges projecting so much as to interfere with complete closure of the jaws; and requiring to be occasionally trimmed off, which was done by the patient himself, but not without some bleeding. The discharge from the tumour was not very copious; hæmorrhage took place from it from time to time. The finger being carried into the mouth, encountered behind the ulceration a rounded tumour, lying close upon the coronoid process of the lower jaw, and leading to the supposition that the tumour had made its way out behind, from the maxillary cavity. The microscopical examination was of a doubtful character, but rather tending to establish the malignancy of the growth.

The patient being informed of the probable nature of the disease, and that it might have already made its way out of the maxillary sinus into the cheek, decided, as his case otherwise appeared hopeless, to have the operation performed, which was done January 28, in the following manner, etherization having been first employed.

An incision was made from midway between the orbit and the ear to the angle of the mouth, with the concavity backwards, the better to expose the tumour, which tended in that direction. The flaps were rapidly dissected up, the large vessels tied, and a freezing mixture applied to the surface so as to stop the bleeding from the small vessels; the ether being used at the same time, and the patient again brought fully under its influence. The first incisor tooth was extracted, and the soft palate, or rather mucous membrane covering the hard palate, cut across, where the superior maxillary joins with the palate bone. The bones were now quickly divided; first, the zygoma; next, the external angular process of the malar bone; third, the nasal process of the superior maxillary; and, finally, the junction of the two maxillaries, by the cutting forceps, one blade of which was introduced into the mouth, the other into the nostrils. The whole bone was now seized with strong hooked forceps and slightly depressed, so as to expose the superior maxillary nerve in the bottom of the orbit, which was divided by the scissors; and, by a few more strokes of the knife, the whole mass was removed. Three or four vessels were tied, but the hæmorrhage was not great.

An examination of the tumour showed it to be of a fibro-plastic character. It occupied the whole maxillary cavity, had made its way out behind, and turned up on its posterior wall under the zygoma; but it adhered so firmly to the maxillary bone as to come out with it enveloped in a cyst.

The edges of the wound were approximated by sutures, and cold-water dressings applied. In a month the patient had so far recovered as to go home. Double vision was experienced for some days after the operation, but the control of this faculty was soon regained. The loss of sensibility in the integuments, consequent on division of the nerves, was partially restored, and is constantly improving.

*Tumour connected with the Cerebellum.*—Dr. J. B. S. Jackson reported the case, of which he had lately made the dissection. The mass was about the size of an English walnut, perfectly defined, firm to the feel, partly made up of three or four small cysts, and partly of a solid whitish substance. Externally, it was somewhat lobulated, traversed superficially by large thin vessels; and the whole appearance, externally and internally, was such as to suggest the idea of malignancy, though nothing was discovered by the microscope to favour it. The tumour was connected with the under surface of the right lobe of the cerebellum, and appeared to have been formed in the pia mater. There was a very large serous effusion in the lateral ventricles, as usual in such cases; and the fifth ventricle was observed to be particularly dilated. The brain itself was healthy. The patient was a middle-aged man, and by profession a clergyman. Deafness in the right ear was observed two years ago; and the tumour may then have been of some size, though no other symptoms occurred until the following autumn. Then there came on occasional paroxysms of headache and vomiting; and this last was a very marked symptom throughout most of the disease. Last summer the gait became unsteady, and there was towards the last much loss of power, though it was never complete. The intellect also became dull, and, since last October, when he gave up his professional duties, he was mostly, if not entirely, confined to the house.

*Abscess of the Tibia; Trephining of the Bone, &c.*—A section of the tibia, upon which the above operation was done, was sent by Dr. Sargent, and exhibited to the Society; it shows great thickening of the bone by reason of inflammation. Dr. S. operated last week upon the patient, a young man of twenty-seven years, who had had periostitis of the left tibia, near the knee—perhaps owing to a blow—for eighteen years, at times with exfoliation, and, until quite recently, with little tumefaction. During this period of eighteen years the patient had, however, been free from pain most of the time; he had been able to complete a collegiate and professional education, but had always been subject to seizures of severe pain in the region indicated, with soreness, and also with pain in the course of the sciatic nerve; there were also disturbance of the digestive system, and, occasionally, wandering neuralgic pains. Within the past year these attacks had been more frequent than before, and much more severe, so that the patient had been confined to the house much of his time. The leg had become considerably flexed, and any extension or motion whatever was painful. For two months past the swelling had been gradually increasing, and obviously it was an enlargement of the *bone*, as well as a thickening of the periosteum; it was quite tender to the touch, and finally became œdematous over its surface. The pain was so severe that the patient often begged for amputation. The joint was entirely unaffected. General health good, except for disturbance by pain; no rigors. Dr. S. trephined the tibia April 23, 1854, perforating it just below and within the insertion of the ligament of the patella, and opened into an abscess, from which there issued perhaps two ounces of creamy pus. The periosteum over the seat of the disease was more than half an inch thick, and the bone, as seen in the specimen, greatly thickened. The patient had some pain following the operation, but has been entirely relieved since; he is gradually acquiring the power of motion with the limb.

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## RICHMOND HOSPITAL.

### *Cases of Strangulated Hernia, with Clinical Remarks.*

BY JOHN HAMILTON,

SURGEON TO THE HOSPITAL.

Success in operations for strangulated hernia is best secured by not spending too much time in previous attempts at reduction. This has become an axiom in surgery. We are, however, occasionally surprised, in cases where the best attempts at reduction have failed, and the operation been decided on, to find the rupture slip up at the slightest effort, and the threatening aspect of the case suddenly cease.

Some years since a stout young man, a labourer, was admitted with strangulated hernia of the right side. The symptoms severe, the hernial tumour tense and hard. The ordinary means of reduction, the warm bath, the application of ice, &c., had failed, and I desired him to be brought down to the operation room. While on the table, one of my colleagues was feeling the tumour with one hand, without any idea of reduction, when it softened under his fingers, and went up with a gurgle. The man had great dread of the operation, and it is very likely that fear had the same depressing influence as a tobacco enema would have had, by producing such relaxation, that the stricture was loosened sufficiently to allow the bowel to return.

In a case of my colleague, Dr. Hutton, which I saw in consultation with the other surgeons of the hospital, a right inguinal strangulated hernia of many days' duration, and in which the symptoms were so advanced, that if the man would have consented to the operation, which he had hitherto obstinately resisted, we considered it no longer advisable, the belly being much swollen and tense, tender and tympanitic, the rupture itself very tender, and the integuments over it œdematous; a constant gulping-up of yellow fæculent-looking fluid; great prostration of strength, the face sunken and contracted, the pulse rapid and feeble. Two or three hours after, while the patient was fidgetting and handling the rupture, it went up, and the formidable symptoms which, in a few hours longer, would have inevitably led to a fatal result, rapidly subsided. We may rationally conclude, the relaxation which led to so unexpectedly favourable a termination of the strangulation was induced by the depressing effects of the inflammation of the peritoneum and intestines, which subsided after the cause was removed.

In the next case, chloroform, administered as an oblivious antidote to the operation, removed the strangulation.

November the 5th, 1853.—I was asked by my friend, Dr. James Brady, to see a boy thirteen years of age, labouring under strangulated inguinal hernia. Two days before, his father struck him a few blows with a cane on the shoulders. He screamed violently, and continued doing so for half an hour. In about two hours he vomited, and from time to time he vomited during the night, and complained of pain in the left groin. He had formerly a rupture, for which he wore a truss, and was thought to be cured; he had also been tapped for hydrocele.

Just when I saw him, he felt an inclination to vomit, and threw off some water that he had drunk, with a shreddy black substance through it. The lips were dry, the tongue thickly loaded with dark yellow fur.

The right side of the scrotum was distended, tense, elastic, and transparent. The tumour could be isolated from the external ring, and there was no impulse on coughing. There could be no doubt, therefore, as to its being hydrocele. But, from the external to the internal ring, that is, along the whole inguinal canal, there is an oblong tumor, lost in the belly, very tender and somewhat consolidated, and which is, no doubt, a strangulated portion of intestine. Immediately above this the belly is tender, and he said he occasionally felt pain there, but the belly generally was free from tenderness, flat and natural looking; pulse, 112. He had had no motion from the bowels, all purgatives had been rejected by the stomach, and an injection had passed unchanged, and as he had now had incessant vomiting for two days and nights, it was clear little time was to be lost.

In consultation it was agreed to give him the chance of a warm bath till fainting, and then, if taxis failed, to operate.

He got faint in the bath, and being quickly carried to bed, I tried the taxis. The part seemed less consolidated, and softer, but I could not reduce the strangulated bowel; and the motion of turning in bed brought on vomiting of the same dark curdy stuff in water, but no fæcal smell. An injection passed unchanged.

He was brought into the operating theatre, and chloroform administered. While completely insensible under its influence, I tried the taxis. The hernial tumor felt softer, and after a little manipulation it went up and disappeared.

It was very hard to rouse him from the effects of the chloroform, and he was carried to bed in a partially insensible state. At half-past four o'clock I found he had vomited, probably from the chloroform; but he had passed a small clay-coloured mass of fæces. He soon got well. A few hours after the reduction the hydrocele had gone.

A healthy-looking woman was admitted into hospital, August 28th, 1854, with a strangulated femoral hernia. It had been so for four days; the bowels obstinately costive, vomiting incessant, and she complained of dreadful pain in the belly. Attempts had been made at reduction by an experienced country practitioner; an hospital surgeon accustomed to treat such cases; and, lastly, after admission, by the resident pupil. Nothing in the way of taxis had been left undone, and I was sent for to perform the operation. Half an hour before I saw her, however, she suddenly passed a motion, and soon after a second. Since then she had not vomited. I found the belly, previously tympanitic, not much swollen, soft, but tender. The rupture was rather large, of a pear shape, and at first felt tense and tender; but as I handled it, I found it yield, and by relaxing the thigh it went up. After the bowel was reduced the sac felt thick and large.

This case is curious, that on the fourth day of strangulation the strangulation should have ceased spontaneously, and reduction should have been so easily accomplished, after repeated well-applied efforts at the taxis had failed at an earlier period.

Experienced surgeons will, no doubt, call to mind cases similar in many respects to those now related. The deduction from them is plainly, not that the operation should be delayed, but that in cases where, from the obstinacy of the patient, or other cause, it cannot be done, we should watch the patient and the hernial tumor till the last moment, in the hope, faint though it be, that a change may take place, the stricture relax, and the hitherto irreducible rupture become reducible.

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In operating on a strangulated hernia, we sometimes find the omentum so adherent or so diseased as to be irreducible, and no little perplexity is experienced as to its proper treatment.

The relation of a few cases may help to guide us in the matter.

The first is a case of large umbilical hernia. This species of hernia is not often the subject of operation, which, though easy, is comparatively more fatal than for inguinal or femoral hernia. The present case presents considerable interest, on account of the successful treatment of a large mass of diseased omentum.

A woman, ætat. forty-five, was admitted into 13 Ward, March, 1852. She had a large umbilical rupture, irreducible and strangulated four days, the vomiting having first occurred then; she mentions the almost incredible fact that she has had no motion for fourteen days.

The tumor is large, tense, and tender, but the symptoms are not very urgent, the pulse not very quick, nor is the belly tympanitic or tender. She is of spare habit and weak frame. The usual means having failed, I operated, assisted by my colleagues, Messrs. Hutton, Adams, and Fleming.

A T incision, with the cross downwards, soon brought me to the sac, which was pinched up, and divided freely up and down. I found the sac to contain a considerable quantity of omentum, thickened, and with the glands hard and enlarged; *above* it, a large knuckle of small intestine, of a livid pink colour, and quite flaccid, showing the constriction to have been so great that the air had scarcely entered the intestine. I divided the stricture, which was very tight, formed by the ring, on a director freely. Then the intestine went up readily, but the omentum still remained irreducible, and it became a question what had best be done with it. The objection to cutting it off was, that there must be a certain amount of bleeding, which she could ill sustain, and the mass was so large that it could only be returned by enlarging the opening to an unjustifiable extent. I thought it best to leave it, hoping that adhesive inflammation would glue it where it was against the opening, as a kind of pad against further intestinal protrusion.

She vomited during the administration of the chloroform, but not after the operation. She was so weak that she got a little wine and water. A turpentine enema.

Thursday, March 4th.—Not going on well; vomiting frequent, and no motion from the bowels. The injection passed off unchanged. She complains of pain and soreness in the belly, which is rather tympanitic; but she has not the great pain, the "heavy pain," she had before the operation. Tongue not bad; pulse, 108. One grain of calomel every second hour, and an enema purgans with the long tube.

Friday, 5th.—The treatment yesterday had the best effect, as the bowels were moved naturally three times after the injection. No vomiting since, and she calls for food; pulse 116; belly loose and not tender. She is teased with a cough, which hurts her at the seat of the operation.

After this there was no bad symptom. With the exception of one small spot which suppurated, the whole of the large wound united by the first intention. March 25th she was dismissed, Mr. Read having made her a truss suited for an irreducible umbilical hernia, the hernial tumor being about the size of the closed fist.

In the next case, after the reduction of the intestine, the omentum had to be left out, in consequence of very extensive adhesions to the interior of the sac. The termination, though different was not less favourable.

A stout, healthy countrywoman, aged forty, had long had femoral hernia of the right side, which she could get up, and for which she had worn a truss. She was admitted into the hospital, in consequence of the rupture becoming irreducible and painful, and vomiting, with obstinate constipation, supervening. The resident pupil, Mr. M'Dowel, tried the taxis in the warm bath, and an injection, but ineffectually. The belly was swollen and tender; she had a tight feel round the abdomen at the umbilicus; a furred yellow tongue; pulse 100. The rupture, which was not a large one—the size of a small orange—was tense and tender; so thirty-six hours after the strangulation I operated, my friend Mr. Curling, who happened to be in Dublin, and Dr. Fleming, being present. She was rather hard to bring under the influence of chloroform. A portion of the integument was pinched up and divided obliquely over the hernia; and a[illegible] few layers had been divided, I came on the tense sm[illegible] that it was impossible to p[illegible] It was so tense scratched through it with the point of [illegible] so I A drop or two of bloody serum flowed out when [illegible] was entered, and on a director it was slit up and down. At the upper part was omentum, rather crumpled and irregular, but soft and healthy-looking; beneath it a very congested plum-coloured knuckle of small intestine. I felt with the left forefinger nail that the stricture was very tight indeed; so I carefully passed up a director into the abdomen between the bowel and the base of Gimbernaut's ligament, and turning the groove rather forwards passed the hernia bistoury, and divided the stricture forwards and inwards. It screeched under the edge of the knife. The intestine was readily reduced, but I found it impossible to get up the omentum: this I found to depend on adhesions between it and the sac, firm and evidently of long standing. I divided a few, but found so many and so firm, that it appeared best to leave the omentum unreduced. Two sutures and a light compress were applied to the wound.

August 28th.—The bowels had acted so freely since the operation that it approached to diarrhœa. I removed the compress of lint, and found it saturated with a thin dirty pus, the wound healthy; the sutures were removed and the wound gaped, not the least adhesion having taken place. The omentum looked unchanged.

August 31st.—General state satisfactory; but the whole of the unreduced omentum is in a state of slough. I removed the greater part with a scissors; a good deal of thin fœtid discharge.

The rest separated a couple of days after, and the wound soon granulated, contracted, and filled up. She left the hospital a fortnight after the operation, and six weeks after applied a truss, though no regular hernial tumour showed itself.

The very tight strangulation may have arrested the circulation in the veins of the omentum, and the blood in them have become coagulated, and thus, in a part so isolated as the omentum, have produced the gangrene. Perhaps mere exposure to the atmosphere may induce the same consequences.

August 8th, 1848.—An old man about sixty was admitted with strangulated femoral hernia of the right side. He had never worn a truss, and says he was able to put it up till the last fortnight. He has suffered pain for the last four days, but only began to vomit a short time before admission. The belly is swollen and hard, and he complains of pain at the left umbilical region: this is increased by any attempt to reduce the hernia. The symptoms were not severe.

The hernia was about the size of an orange; over the cribriform space, and overlapping a little Poupart's ligament. It was tense, but pressure the tumour, but expelled the air and ma tumefaction could be felt a considerable remain essrs. Hutton, M'Donnell, and Adams being present, I performed the operation. Under a thin layer of omentum, the coil of intestine appeared closely connected by soft adhesions to the inside of the sac. The adhesions were divided by the finger and the director. Not without some difficulty I passed the director on the inner side of the intestine, between it and Gimbernaut's ligament. The outer free edge of this ligament was divided and creaked under the edge of the bistoury. Though the stricture was freely divided, I found that the intestine, although it could be rendered flaccid by the expulsion of the air in it, could not be returned. By its long-continued state of irreducibleness, it had become very congested and thickened, so we all agreed that the stricture having been relieved, it was best to leave the parts as they were. I need not go through the daily progress of the case, but merely think it necessary to say, that after some severe symptoms, and considerable difficulty in moving the bowels, on the seventh day I drew away with a forceps some loose detached portions of the omentum which sloughed, and on the next day, the eighth, the irreducible portion of intestine suddenly went up. I believe the reduction took place by the aperture of the ring having become enlarged by the removal of the gangrened omentum.

There seems to be a want of vital power in the omentum, and hence its tendency to run from common inflammation into gangrene. If it is to become gangrenous when its excision is not deemed advisable, it is quite clear that this had better take place without the abdomen. In doubtful cases, therefore, it is best to leave it unreduced, particularly when there have previously been long-continued attempts at the taxis. Mr. Lawrence quotes a case from Dr. Macfarlane, where "the contused omentum, instead of being excised, was, unfortunately, returned into the abdomen, became gangrenous, and produced death."

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## *Some Observations on Chloroform.*

BY DR. CORRIGAN,

PHYSICIAN IN ORDINARY TO THE QUEEN, IN IRELAND, ETC., ETC.

*Internal Administration, Dose of; Quantity in which it may be taken without Injury; its Use in Delirium Tremens, &c.; Objections to its Exhibition by Inhalation in Delirium Tremens; Choroform Liniment—Form of, for Neuralgia, &c.*

I should not think of occupying space with the following observations, were it not that they relate to the use of a remedial agent of great power, and of whose properties and administration we have yet much to learn.

First—With regard to its dose. For a considerable time past we have been in the habit in our hospitals of administering chloroform in larger doses than are usually advised in works on Materia Medica. To procure sleep in fever (*vid.* Dr. Gordon's instructive communications in HOSPITAL GAZETTE of February 1st); to afford relief from pain in painters' colic, &c., the minimum dose given is usually half a drachm repeated every two or three hours, and the dose is very frequently increased to a drachm. In delirium tremens, the dose is generally a drachm at first, and is often increased to two drachms. It may, however, be taken not only with impunity, but with advantage in much larger doses:—

On the 18th February, I saw Mr. H——g. He had been leading a most intemperate life, drinking as much as two pints of whiskey daily for a fortnight previously.

When I saw him, he was without sleep for the fortnight, and with the usual signs of the onset of a most severe attack of delirium tremens. I prescribed for him the following mixture:—

Chloroform, ʒv.
Pulv. glycirrhiz. ʒ v.
Mist. camph. ℥ix. ss.

with directions that he was to take at a dose an ounce, which was equal to half a drachm of chloroform. He again drank after I saw him on the 18th (Monday), and in the evening took one dose of the mixture, or half a drachm of chloroform. He went to bed in his usual state, and lay without sleep. In the course of the night, when suffering under extreme thirst, he stretched out his hand for a bottle of soda-water; in mistake laid hold of the chloroform mixture, emptied it into the tumbler and swallowed it at a draught. It contained four drachms and half of chloroform. He slept well after taking it, and suffered neither from burning nor pain next day. He was sick in his stomach on Tuesday and Wednesday, but slept well each night. On Thursday some appearance of jaundice set it. I saw him again on the following Saturday. He was jaundiced and felt slightly sick, but all traces of delirium tremens had disappeared. I could not attribute the supervention of jaundice to the dose of chloroform. It was a complication not unlikely to arise from his habits. We have the main fact, in which at present we are interested, that more than half an ounce of chloroform may be taken into the stomach in a single dose, without causing any poisonous effects. Combination of chloroform with opium will be found, I believe, to form a most useful exhibition in delirium tremens. Its exhibition, on the contrary, by inhalation, in delirium tremens, is of very doubtful utility, and is attended with extreme danger.

Dr. Gordon has, in the February Number of this Journal, given some important practical information on trials of its administration by inhalation in fever for the purpose of procuring sleep. The results discourage its use, and as far as my observation has gone, I would also altogether disapprove of its exhibition by inhalation in delirium tremens. The risk to life is very great; two fatal cases have come within my knowledge: in one, death was instantaneous; in the other, the patient sunk into collapse under its administration, never rallied, and died with blue lips and cold surface in less than an hour. Patients suffering under an attack of delirium tremens will not unfrequently suddenly drop dead after a moment of excitement; but still when a patient, even in such a disease, passes into death without rallying from the well-known effects of chloroform inhalation, it appears to me to be sufficient reason for refraining from its use. Even where its inhalation produces sleep, either in fever or delirium tremens, the effect appears to be but transitory. This has been already noticed in Dr. Gordon's observations in respect of fever. In the following case this effect is also illustrated, and although the patient did not die, the escape from collapse was sufficient to prevent re-employment of the remedy.

Mr. K. was seized with delirium tremens, of the asthenic kind, on May 6, 1852. In the course of next day, 7th inst., he had eighty minims of tinctura opii, in camphor mixture, without benefit. On the 8th the quantity of opium was increased; he had sixty minims of tinctura opii in one draught, and afterwards two draughts, with 30 minims in each, without benefit. On the 9th he had a draught every two hours, with thirty minims in each. He took in all eight of these draughts, but still no sleep, and during the night took six draughts more, containing each forty minims of tinctura camphoræ, and thirty minims of tinctura opii. A similar treatment was continued up to the 11th inst. There was still no sleep, the tongue was dry, and the pupils contracted, showing that the poisonous effects of opium were beginning to develope themselves.

In this condition, as opium could be of no furthur use, and as I was then not sufficiently acquainted with the valuable action of chloroform given by the mouth, and its freedom from danger, I determined to use chloroform inhalation. It was evident that without sleep the patient must very soon die; and opium had failed to procure it. I used about two drachms of chloroform by inhalation, and with the necessary precautions. The patient became as usual excited, and then suddenly let the head fall back. The lips became blue; the breathing laboured; the pulse became very weak and intermitting; and the pupils dilated. Fresh air, ammonia, and dashing with cold water, kept up respiration and the heart's action; and he passed from this state into quiet sleep; but soon after, awaking at the end of a few hours, the symptoms of delirium tremens returned, putting on, in addition, an appearance of maniacal delirium. This, next day, 12th inst., passed into delirium tremens of the same form as at first, which required for that and next day full opiate treatment. The case recovered; but the risk to life in the case itself at the time of inhalation, the relapse of the symptoms, and the fatal issue in other cases, appear to me to be sufficient reasons for discouraging, very strongly, the use of chloroform by inhalation in delirium tremens; and we can the better afford to dispense with its aid now that we are aware in what considerable doses it will be borne by the stomach; and that while it procures sleep it does not entail risk to life. The external application of chloroform is one of our most useful anodynes, but in the directions for its employment externally, as before noticed of its internal administration, it appears to me that it is not usually ordered of sufficient strength: one part of chloroform to seven or eight of ointment or liniment is not of sufficient strength. I think it will not often disappoint if the liniment prescribed is directed to be made of equal parts of chloroform and olive oil. In this form it will be found to give often great relief in ordinary neuralgic pains, and to remove instantaneously those distressing pains, often described as cramps, really neuralgia, which accompany cholera, and which are so often referred to the sides of the fingers and toes, and described as running along the tendons, very often most acutely felt in parts where there are no muscles to give rise to cramps.

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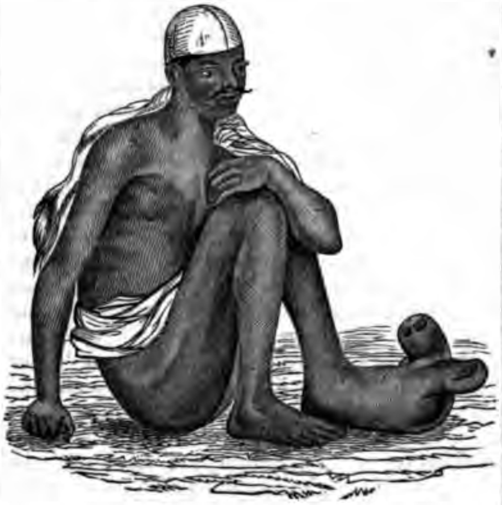
## A Case of Hypertrophy of the Left Foot.

### BY BENJAMIN SIMPSON, M.D.,

ASSISTANT SURGEON, HON. E.I.C.S., AT PRESENT STATIONED AT LAHORE.

I met with the subject of the accompanying sketch, in marching through the upper provinces of India, where I have since seen numerous cases of a similar nature, though by no means so exaggerated in form. This is also the experience of many medical men of long standing in the service, to whom I have showed the case. I was induced to make the present sketch for two reasons: first, as I believe the disease is of rather uncommon occurrence in Europe; and second, as on examination it appeared to be very similar to one which I saw in the Richmond Hospital [the details of the case alluded to were published by Mr. Adams, p. 260 of this Journal.—Ed.], in which the parts affected were the index and middle fingers of a child. I regret that I was unable to make a cast in the present instance, as, though I paid the man's expenses, and brought him on to Meerut for the purpose, I was unable to find any materials, not even gutta percha. I tried to induce him to come into hospital, but he would not, and at once absconded. I had, however, made the present sketch in my tent, when I first saw him. I, at the same time, took accurately the measurement of the feet, which were as follows:—



*Right Foot.*—Circumference of the foot, 9 inches; length of big toe, 1½ inches; circumference of leg near ancle, 8⅛ inches.

*Left Foot.*—Circumference of foot, 15¾ inches; length of big toe, 4¼ inches; circumference of leg near ancle, 7½ inches; circumference of big toe, 7½ inches; circumference of second and third toe together, 8 inches; circumference of fourth and fifth toes, 1⅞ inches; length of second and third toes (united) 3½ inches.

The patient could give no account of his case further than that the swelling had existed from his childhood, gradually increasing, and was free from all pain, though a source of much inconvenience from its excessive size and weight. On looking at the measurements the following may be observed:—The circumference of the big toe is exactly the same as that of the leg on that side, which is slightly atrophied. This latter may be accounted for by the fact that he was in the habit of merely dragging the limb after him, the muscles never being called into play on the diseased side.

The second and third toes form but one heap, and equal in size the sound leg. The bones, however, are distinct, and can be felt moving one on the other; the fourth and fifth toes (of which a small portion only is visible in the sketch) are of the normal size, measuring together 1⅞ inch; the nails are all perfect, but proportional to the size of the toe in each case. I omitted to mention that the patient was one of the class called in India "grass cutters," who supply the camps with provender for the cattle. This man was in the habit of walking fifteen miles per diem, on an average, carrying for half the distance a large bundle of grass on his head.

[We are indebted for the above interesting communication to Dr. James S. Hughes.]

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## Case of Extraction of a Calculus from the Urethra.

### BY C. DUIGAN, M. D., MULLINGAR.

J. B., aged forty, a respectable farmer, applied to me about a month since; he was then labouring under symptoms of stone in the bladder. I sounded him with a silver catheter, and thought I detected the presence of a small calculus, but deferred giving a positive opinion until I should have made an examination with a more suitable instrument.

I lost sight of him until the evening of Monday the 23rd instant, when he again applied to me, giving the following history of his case, since I had last seen him:—

Deterred by fear from coming to me, he continued to suffer from symptoms of stone in the bladder, until the morning of Sunday the 22nd, when after a violent fit of straining, having just made water, he felt the stone pass into the urethra, along which, within the next three or four hours, it was gradually forced, until it arrived within a few lines of the position it now occupies. Finding that it stuck there, and produced partial retention of urine, he went to a medical man in the neighbourhood, who, after several attempts, failed in extracting it, during which efforts he broke very many small fragments from the end of the stone next the orifice of the urethra.

He came to me the following morning, but owing to absence on professional business, I did not see him until six P. M. He then suffered from complete retention of urine (not having passed water for ten hours); complained of violent pain in the glans, which was swollen to fully twice its natural size. The orifice of the urethra was so reduced by the surrounding swelling and inflammation, as to render even the introduction of a silver director, of the ordinary size, troublesome and painful; there was also paraphymosis.

A hard substance could be felt fixed in the urethra, occupying apparently about half an inch of the canal, and situated at the junction of the glans and body of the penis.

This, on further examination, proved to be a calculus, with the end next the orifice, rough and broken (I presume by the former attempts at extraction), lying longitudinally, and firmly impacted in the urethra.

With a strong narrow-bladed forceps I attempted to extract the stone, or break it into small pieces, but the attempt was unsuccessful, causing intense pain.

Taking into consideration, the inflamed state of the parts, the size, hardness, and rough end of the impacted calculus, the narrowing of the orifice, and the complete retention of urine, I conceived it best to remove the stone at once, by an incision, which I accordingly did, by passing a director with its groove downwards as far as the stone, and dividing the urethra with a bistoury, I then readily removed the stone with a forceps, the incision was not more than half an inch in length, and bled freely.

By encouraging the bleeding for a few minutes, the swelling of the glans so far diminished, as to allow me to draw forward the prepuce, which acted as a bandage to the swollen glans, and kept the lips of the wound together.

In two hours after he was free from pain, and had passed water freely, and in two days the urethra was healed, and the patient quite well.

The calculus consisted of oxalate of lime; it is of an irregular oblong shape, flattened transversely; about one-sixth of the end was broken off by the attempts made to extract it. It weighed nineteen grains when extracted, and allowing for the quantity removed in small portions, must have, I presume, weighed originally twenty-three or twenty-four grains: longest diameter, five-tenths of an inch; transverse, four-tenths; depth, three-tenths and a fraction.

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## Notes of an Attack of Choleraic Diarrhœa.

## BY A MEDICAL PRACTITIONER.

*Dublin, August*, 1854.

R. M. was attacked with profuse diarrhœa about three o'clock in the morning, accompanied with burning thirst. The purging of liquid stools lasted until twelve o'clock, when it was checked by mulled wine. R. M. attempted to follow his usual avocations, but on the next night was seized with intense headach, pain across the loins, with constant desire to pass water; urine scanty, of a high colour, acid, and of the sp. gr. 1035. Mouth as if filled with salt; bowels natural. Went into the country for change of air, and for eight days could touch no food but boiled rice, eggs without salt, milk, and soda-water with milk. Specific gravity of urine gradually decreased, but even after a fortnight, he cannot bear to touch salt. R. M. mentions this, as it is possible, in profuse diarrhœa, that the saline particles of the blood are not carried off, from whence arises the burning thirst so often complained of. In this case, even the secretion of tears crystallized along the cheeks in the morning. The eyes were sunk in the head; voice altered; skin of a dusky brown; loss of flesh great for so short an illness.

[The attack above described was evidently one of choleraic diarrhœa. The gentleman who thus records his own case is an eminent practitioner of this city. He attributes the affection to his having been in attendance upon two persons who were similarly attacked, and who resided at a fish-market, in —— street. He says, "The smell of the house from the sickness and bad sewerage affected me." He also adds, "I may mention that the pulse sank to 54 and was feeble, and aphthæ appeared over the mouth and tongue."]

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## EXTRACTS FROM BRITISH AND FOREIGN JOURNALS.

### On Rheumatism and its Complications.

The following extracts serve to exhibit some of the leading features which are at present attracting attention with reference to this disease; they also contrast the views entertained in Germany, America, and England, respecting its treatment:—

*On the Use of Alkalis in Acute Rheumatism. By* George Budd, M.D., F.R.S., *Physician to King's College Hospital.*

Dr. Budd, after going into a description of the ordinary phenomena of rheumatic fever and rheumatism, dwelt on one of the more formidable and common results of rheumatic fever—namely, diseased heart.

"The frequent occurrence of this complication of rheumatic fever was now so well known, indeed, as to require only to be stated. He thought, in one half of the cases—nay, more—three-fourths of the cases of rheumatic fever coming into King's College Hospital, they found severe disease of the heart. It may occur," said Dr. Budd, "at the onset, or still later in the disease; but, as a general rule, it will be found to run parallel, so to speak, with the fever and constitutional derangement. We find the deposit from the blood, or inflammatory result, under two chief forms: first, and most formidable, deposits of lymph—beads of lymph, so to speak, on the edges of the valves of the heart, of the left side particularly, impeding more or less its normal functions. These effusions, or beads of lymph, are the result of a peculiar increase in the fibrinous portions of the blood. These deposits give us the stethoscopic signs of diseased valves. We have next effusion into the sac of the pericardium, with so-called pericarditis, and very often also inflammation of the contiguous pleura. Now, I think, if you will watch the cases in the wards," continued the lecturer, "those of Dr. Todd and mine, that you will find at least three or four cases of rheumatic fever, with diseased valves and bellows-murmur, to one case of deposit on the exterior of the heart with friction-sounds. This is a very useful and practical point to keep in mind. Any disease of such delicate parts as the valves must be more serious, as leading to permanent organic disease, and cannot too soon engross our attention.

"Now, as to rheumatic fever, what do we generally find? Very frequently you will not discover all that in books, but pain and palpitation, if inquired after, are generally found; pain of an obscure, dull character, over the region of the heart; there is also that remarkable hurry of breathing, which betokens fever; in place of the respirations numbering, as they should number, about 18 to 20, they are higher—30, or even double the normal amount, when the valves take on the disease. With this rapidity of breathing we have what is called a single bellows-sound, with the first sound of the heart, in other words, a systolic *bruit*, very well marked. This sound, in contradistinction to the friction or rubbing-sound, is best heard at the apex of the heart, the rubbing-sound ending, and very possibly will be heard only for two or three days, and then ceases when adhesion takes place, the valvular *bruit* still audible at the apex. The point I would next wish to draw your attention to is the great tendency to relapse observed in rheumatic fever. The patient, the chances are very many, will tell you he has had rheumatism before—aye, maybe two or three, or even four times. Rheumatic fever, it must be confessed, is a very obscure disease; it is more common in London than in the eastern parts of England. It is evidently modified by climate; it is more common amongst men than women; it seldom occurs beyond the age of thirty, the chief tendency to the disease existing between the age of fifteen and thirty. Some persons of a thin, ligamentous development of body are peculiarly susceptible of it, and the most frequent cause seems to be damp combined with cold.

"We now come to the essential question of *treatment*. This, at King's College Hospital, after treatment of various kinds, I find to be best under the form of large doses of alkalis. I usually prescribe the bicarbonate of potash (gr. xii. ad gr. xv.,) with nitrate of potash (gr. v.) every four hours; or, if we put it in technical language, it will be—

℞ Potassæ bicarb. ʒi.
Potassæ nit. ℈i.

Tere simul bene et in part. iv. divide; detur i. horâ quartâ quâque.

I know no plan of treating acute rheumatic fever at all equal to this; it suggested itself to us from the large amount of acid in the system. I think it as successful, if not more so, than any other plan tried in University College Hospital. It is quite as remarkable how the symptoms yield according as the urine becomes alkaline. You will find, where many joints are affected, the urine is extremely acid. You will do well to keep the bowels also well opened, as mal-assimilation assists the rheumatic diathesis; colocynth extract, and a little blue-pill, or a saline cathartic mixture, according to circumstances, should be prescribed. Another medicine of great value in rheumatic fever, and one which you cannot do without, is opium; you will find your patient, with rheumatic fever, gets worn out if you do not give him a moderate draught containing morphia or opium at night. You must take care and economise your patient's strength; take care he is not worn out, for in all such patients rheumatic fever is much more difficult to cure. I find it necessary to keep up the strength very often, and then we order a mixture of decoction of cinchona and the alkaline carbonates as before, a mixture perhaps not very chemical, but still very useful, indeed most eminently so in restoring the 'tone' of the system as well as the appetite and strength.

"There is another subject now on which I wish to speak—namely, *local* treatment; this is a point, perhaps, not sufficiently attended to; it has been found that the joints of the body most exposed, such as the wrist, ankle, knee, &c., are more liable to rheumatic inflammation than the shoulder or hip well covered with muscles. Accordingly, it is found useful to take the hint, and in this hospital we envelope the limb in oil silk, and cotton wool; we also find a warm alkaline fomentation—half an ounce of carbonate of potash to a pint of water—gives very considerable relief. There is another application I have great faith in, a small blister, not placed *on* the joint, but *above* it, between the joint and the heart—it seems to act by drawing off the inflammation from the joint to the parts above it, so as not to be aggravated by motion—mind the blister is *above* the joint, not at all over the joint. A blister may be said to be lowering, but rheumatic inflammation is much more lowering; finally, if there should remain chronic thickening of joints, I order the iodine paint."—*Medical Circular.*

### *Upon Rheumatic Pericarditis, by* Dr. Eutenberg, *of Coblentz.*

From experience collected by the author the following conclusions are deduced. First as to the symptomatology: most authors affirm that there is pain either confined to the region of the heart, or extending from the left side to the shoulder and the mesogastrium. Dr. Eutenberg found it in none of his cases; and he remarks that Laennec, Hope, and Bouillaud, have all remarked upon its occasional absence; hence he infers that it is a sign of complication with pleurisy or pneumonia. At a later period, when abundant exudation is poured forth, a heavy pain is experienced.

Severe feverish symptoms occur only in the very acute cases. Then the thirst is oppressive; but the power of drinking limited on account of severe dyspnœa. The urine is mostly very red, with a sediment of phosphate of ammonia and uric acid. There are severe night sweats, especially about the head.

At the commencement there is a marked sense of oppression, which becomes worse with the increase of the exudation.

The position of the patient is characteristic, whether the pericarditis be acute or chronic. He avoids lying on the left side. The recumbent posture on the back, or, if there be pleurisy, the sitting posture, are most convenient. There is generally cough, at first of catarrhal character. Sickness, as mentioned by Knox, Kreysig, and Bouillaud, Dr. Eutenberg found only once in eight cases. The pulse is very quick, 140—200. The sounds of the heart are mostly clear and defined; but a peculiar fluttering movement accompanies the heart's beat, when the exudation is excessive, and interferes with its action. Hope remarked this in connexion with carditis. The pulse is always small, but not intermitting. Respiration is hurried, but without remission. There is no sign of adhesion of the pericardium to the heart. The author found it twice in bodies where he could not diagnose it during life.

The author did not find Rokitansky's assertion confirmed, that in the neighbourhood of an abscess of the heart the muscular substance is infiltrated with pus, easily lacerated and discoloured. The want of redness in the pericardium he found remarkable.

The treatment must depend upon the form of disease. In acute cases, attacking muscular subjects, a moderate venesection is recommended; but not its repetition, as Bouillaud has advised. In carditis no bleeding, and endo-carditis very moderate abstraction of blood is recommended. The author makes chief mention among internal medicines of tartarized antimony, combined with sulphate of magnesia, or calomel in severe cases. Should the pulsations of the heart and shortness of breath be considerable, and combined with hurried pulse, Dr. Eutenberg gives corros. sublimat. gr. i., dissolved in sp. vin. rectif. ʒiii. Three to five drops to be taken twice daily. Next to corrosive sublimate stand the preparations of gold, but they are less fit for acute diseases. In chronic relapsing pericarditis the iodide of iron is recommended.—*Pr. Ver. Zty.* 26—29, 1854, and *Med. Times.*

### *On Treatment of Rheumatism in New York Hospital.* By J. B. Chapin, M.D., *Resident* Physician.

The plan of treatment usually pursued was: If the patient presented himself with unusual excitement of the skin and pulse, to administer a mixture of sulphate of magnesia and tartarized antimony until the skin was relaxed, and the pulse reduced to a more natural standard. The Rochelle salt was then directed in drachm doses, every two or three hours during the day time, till the urine was rendered alkaline, when it was gradually suspended. A lotion of carb. potass. ℥ j. with opium ʒ ij. to the pint of water, was directed as an external application. The administration of the salt was not attended with disagreeable consequences, with the exception occasionally of some ulceration about the fauces; in no case was its action so severe upon the bowels as to require its entire suspension. The persons attacked were in the full vigour of health, and the character of the disease acute in its form. The frequency of administration of the remedy was governed very much by the reaction of the urine.

On the admission of the patient, the urine was tested, and, in all cases, was found to be of acid reaction, and the secretion of the skin presented the usual acid odour. The treatment was generally commenced the second or third day after admission, and the urine was rendered of decided alkaline reaction in an average of five days after its commencement; the longest period it resisted the alkaline reaction having been twenty days, and the shortest two. The secretions of the skin have not, I believe, been noticed to alter. In one case, attended with profuse perspiration, which yielded readily to treatment, the coloured shirt the patient wore entirely lost its colour; and it was suggested whether the same change did not take place in the perspiration as in the urine. The average amount of the salt administered was from five to seven ounces.

The average date of commencing improvement was seven days after commencement of treatment, coinciding, in the large majority of the cases, with the commencing alkalinity of the urine. The improvement was invariably permanent, and after the urine was rendered alkaline *no new articulations were affected,* as a general rule.

The average period of convalescence was twelve days after admission, and the whole duration of the disease, including the period previous to admission, was twenty-two days. Of thirty cases treated by Dr. Swett, during April and May, 1853, during which time no uniform course of treatment was pursued, the average duration was five and a half weeks. One of the most gratifying results of the alkaline treatment was the diminished frequency of cardiac complications. Twenty-one of the twenty-five were free from any complication, three were *admitted* with aortic obstruction, and one with mitral regurgitation. Not one patient was attacked with any heart complication during the treatment of the disease. Comparing this result with the practice last year, it was found that four had mitral regurgitation, six aortic complication, and three suffered from pericarditis; thirteen in all, out of thirty.—*New York Medical Times.*

## SUMMARY.

*On the Use of Iodine in Phthisis.*—The following remarks occur in a paper by Dr. Barnston, upon the Parisian hospitals, contained in the *Montreal Monthly Journal of Medicine and Surgery*; it refers to the practice of M. Piorry in phthisis:—"A patient arrives in the ward; he is introduced to M. Piorry, who immediately subjects him to a lengthened examination, in order to ascertain the physical qualities of every organ in his body. Having satisfied himself that there is a circumscribed induration in the upper part of both lungs, this is carefully marked out with a pencil on a piece of canvas, with various shades, indicating the amount of condensation. A plan of treatment, sanctioned by long experience as most trustworthy, is now adopted, and in such cases as the present, where the consolidation is assumed to be tubercular, iodine is the all-powerful remedy. It is accordingly administered in every possible way: for example, it is given—1st. Internally, in the form of solution, and if the stomach is not well able to bear it, after some time, iodine enemata are substituted. 2nd. In the form of vapour, by inhalation, which is resorted to once to three times in the day. 3rd. In form of ointment, by friction upon the cutaneous surface adjacent to the diseased parts. 4th. By means of iodine baths; and lastly, the whole atmosphere is impregnated with the atoms of iodine, by which a constant supply is furnished to act directly upon the tubercular deposition. The patient is thus subjected to treatment, and every successive examination, made with the same minuteness and precision, at intervals of two or three days, shows a slight, but yet distinct and satisfactory diminution in the circumference of the induration, till at length the lapse of time intimates a complete disappearance of the dulness, and return of the lung to its normal condition.

*Laryngitis—Nitrate of Silver.*—Dr. Ebert *Annalen der Berlin Char. Krankheiten,* 1854) employs inhalations of nitrate of silver in substance, with great benefit, in all inflammations of the laryngeal mucous membrane. He has employed the nitrate of silver also in solution after the manner of Green, but has never been able to satisfy himself that the larynx was really entered. The mode in which the solid caustic is introduced is as follows:—Three grains of the nitrate are mixed with one drachm of sugar; the powder is placed in a steel pen, which is itself firmly inserted in a quill open at both ends, the little apparatus is then put into the mouth, so that the end of the steel pen shall be on the root of the tongue, then the lips are closed round the quill, and the patient respires forcibly. The first attempt is almost always a failure, and the nitrate is only tasted on the root of the tongue; but the patient soon learns to manage it very well; a little cough and irritation follow, but no uneasiness. For young children this method does not answer, and a spinal apparatus must be used.—*Medical Circular.*

*Zinc Ointment with Benzoine.*—Mr. Redwood, at a meeting of the Pharmaceutical Society, directed attention to some specimens of zinc ointment, prepared with gum benzoin and benzoic acid. It was a source of considerable inconvenience that zinc ointment was liable to become rancid in a short time, and in that state did not produce the desired effect when applied to the skin. It had been suggested that benzoin retarded this rancidity, and some experiments had been tried with this object. The ointment was made by stirring in benzoin with melted lard in the proportion of *ten grains of benzoin to an ounce of lard. Five grains of benzoic acid* had been added, the same way, to *an ounce* of lard, with similar effect. A question had arisen whether the benzoin prevented the rancidity or masked it by imparting an odour to the ointment. He had, however, separated the benzoin from some ointment which he had received several weeks ago from Mr. Hills, and the ointment, although divested of its aromatic odour, was not at all rancid, while another specimen, made at the same time, without the benzoin, had a strong rancid smell.—*Pharmaceutical Journal.*

*Uva Ursi as an Ecbolic.*—E. G. Harris, M.D. of Fayette, Ala. calls attention to the advantages of uva ursi as a substitute for ergot in producing uterine contractions. In five cases of insufficient uterine action from nervous exhaustion, the administration of a decoction of uva ursi was followed by strong propulsive pains, and the speedy delivery of the fœtus and placenta. This agent is preferable to ergot, because there is no danger in it, and because it does not produce that tonic contraction which is so painful to the mother and hazardous to the life of the child.—*Virginia Med. and Surg. Journal* and *Med. Circular.*

*On the Topical Application of the Nitrate of Silver to the Larynx and Trachea in Croup.* By Edwin N. Chapman, M.D., Brooklyn, New York.—In the *New York Journal of Medicine,* Dr. Chapman details a series of cases in which he employed nitrate of silver ʒss., dissolved in distilled water ℥i., applying it to the larynx and trachea, and introducing the swab at least three inches below the rima glottidis. He then subjoins the following remarks:—

"Setting aside spasmodic croup, arising from causes sympathetic, all cases assuming a fatal character naturally divide themselves into three classes: the membranous, catarrhal, and diphtheritic. The last differs from the first, in frequently commencing by an exudation in the mouth or face, which, by continuity of tissue, extends into the respiratory tubes. In none of the ten cases reported by me was this diphtheritic exudation perceptible, though my attention was most particularly directed to discover it if present. All were either of membranous or catarrhal character; two of them had perfectly organized false membrane, and recovered; of four cases which, from the want of secretion till the caustic was used, and the appearance of the matters subsequently vomited, were judged to be of the membranous variety in the initiatory stage, three recovered and one died. Of the two catarrhal cases, which were nearly moribund at the time caustic was resorted to, both died. One chronic case, from congestion of the mucous membrane of the larynx, was cured. One case, probably membranous, which recovered from the croup, died two weeks afterwards from marasmus.

"Of these ten cases (including those previously reported), seven recovered from the disease, and three died.

"The duration of the disease before the caustic was resorted to was respectively 72, 60, 36, 48, and 60 hours, and 4½, 6, 7, 5 days, and 18 months. Faithful and thorough medication was employed in all excepting one, before resorting to the caustic, yet without avail. Not one of the nine acute cases, in my estimation, could, in the desperate strait to which they were reduced, have recovered by any other known method of procedure, excepting from the doubtful and unsatisfactory operation of tracheotomy, which, in hands the most skilful and experienced, yields results far from being favourable to its repetition. We can readily imagine a case in which suffocation might be imminent, from an obstruction localized in the larynx and upper portion of the trachea, where tracheotomy holds out a solitary and perhaps the only hope for the patient. We have no time to wait for the remedial powers of caustic, which, from its very nature, requires an appreciable interval—very likely five or six hours—before its peculiar powers are displayed in subduing the inflammation or disorganizing the pseudo-membrane that may have been secreted. Unless greatly deceived, even such a case would not require the operation, were the caustic thoroughly and efficiently employed at an earlier date, whilst the obstruction is not too serious, and the powers of life are still strong. We sadly need some remedy, more general and universal in its applicability than tracheotomy, to which we may appeal with confidence, in all cases hastening on to a fatal issue, after active and efficient medication has been resorted to, without producing a favourable crisis.

"Such a remedy I confidently trust we shall find in the nitrate of silver, when its powers have been more generally tested, and its application to the seat of the disease becomes familiarized by frequent and careful practice. I do not despair of seeing it used with as great an assurance of success as in those other kindred inflammations of the fauces, of whatever nature or kind, in which we cauterize so confidently and with such beneficial effects. Even in diphtheritic pharyngitis, between which and the false membrane of tracheitis there is such a close resemblance, we confidently appeal to this remedy, almost certain that the inflammation will subside, and the exudation be detached in shreds and disorganized portions, before the almost magical power of this potent article. Its efficacy, when thus applied, can be observed by the eye.

"I trust that it will be found that the mucous membrane of the larynx and trachea of a similar organization will be equally as amenable to the treatment by cauterization, as a like disease in the pharynx, whether that disease consists of inflammation, or has resulted, in addition, in a lymphatic exudation of pseudo-membrane. Analogy bears me out in asserting, what my experience demonstrates to my own satisfaction, at least, that similar tissues, affected with similar diseases, require for their cure the same remedial agent, unless there are other good reasons why its powers would be less efficacious in the given case."

*Adulteration of Quinine with Sulphate of Soda.*—M. Lehmann, in the "Archiv. der Pharmacie," states that "in examining a sample of sulphate of quinine recently purchased, I obtained first, on attempting to dissolve it in alcohol, and afterwards on burning it on platinum foil, a considerable residue, which was found to consist of inorganic matter. On examining this more closely, I found that it consisted of sulphate of soda. The adulteration is not unimportant, as ten grains of the quinine examined contained two and a half grains of sulphate of soda."—*Pharmaceutical Journal.*

*The Action of Iodic Acid upon the Vegeto-Alkalies.* By R. H. Brett, Esq., Ph. D.—Dr. Brett said his attention was first drawn to the subject, by endeavouring to find out some test which should readily detect the presence of quinidine in quinine; on this point he had come to the conclusion that there was no decisive test, but knowing the peculiar action of iodic acid upon morphia, the production of a brown colour from the liberation of iodine, he thought there might also be some reaction with quinine or any of the other alkaloids. Acting upon this impression, he had made a number of experiments, which had resulted in showing most conclusively, he believed, that the reaction of iodic acid with nitrogenized vegeto-alkalies was such as to distinguish them from all other organic substances. In the first place, he said, he would show its action upon a few of the alkaloids, and afterwards, its action upon other azotized and non-azotized substances, from both the vegetable and animal kingdoms, when a very marked difference in the results would be seen.

The doctor then placed a small portion of quinine in a capsule, and added about an equal portion of iodic acid, with a few drops of water. This mixture, on being gently heated, gave rise to a series of distinct explosions, accompanied by an evolution of gas, and it was to these explosions he wished to draw attention, for no other substance that he had experimented upon would produce them except the alkaloids. He repeated the experiment several times, substituting for the quinine, the alkaloids, strychnia, morphia, and narcotine, and in each case with the same results. He then showed its action upon other—both azotized and non-azotized—substances, not alkaloids, such as meconic acid, salicine, uric acid, gluten, &c.; but there was no explosive action or the slightest appearance of detonation, merely a calm liberation of iodine vapour.

He observed, he had experimented with solutions of iodine itself, but without any result, though he would not insist upon this with much force, as only a few experiments had yet been made; but as far as they had gone no explosive action had been observed. He had also mixed iodic acid with ammonia, but without any result. With regard to the theory of the decomposition which took place, and the cause of these explosions, his impression was that iodide of nitrogen was formed, but even its formation must be looked upon as an extraordinary circumstance, when we bear in mind the small quantity of nitrogen contained in these alkaloids; and what is more extraordinary still, the inability of any other nitrogenized body to produce the same reaction. If this explosive property should be shown to belong, by further experiment, as he had no doubt it would, exclusively to the alkaloids, it would be an important addition to our knowledge of these powerful medicinal agents; for instance, if we treat an unknown white substance with iodic acid, and get no explosion, we can say at once, that body is not one of the alkaloids, and as far as he had tried experiment upon the salts of the alkaloids, which were upon sulphate of quinine and muriate of morphia, he had found the reaction the same as upon the alkaloids themselves.—*Pharmaceutical Journal.*

*Cod-Liver Oil in Consumption.*—Professor Wood remarked to the College of Physicians of Philadelphia that he had looked to the obituary tables accompanying, from year to year, the reports on meteorology and epidemics with deep interest, in reference to an important therapeutical question—the efficacy of cod-liver oil in the treatment of pulmonary consumption. The oil has been almost universally employed in this disease; and during the first year after its introduction, a most striking effect was observed—the number of deaths from consumption diminishing surprisingly. Now, there appeared to be no other cause to which this diminution of deaths could be attributed, excepting the use of cod-liver oil. Still Dr. Wood had been fearful of attributing too much to the influence of this agent, inasmuch as it was known to have the effect of postponing the fatal event—of prolonging, without eradicating the disease; and hence, might cause the mortality from consumption to be thrown into future years. Dr. Wood had looked with some solicitude to the report for the past year for a solution of this question; and he was happy to find the augmentation in the deaths from consumption in 1853, no greater than is indicated by the report. This speaks very favourably for the remedial powers of cod-liver oil. There was to be anticipated an increase in the mortality from consumption during the past year, as the postponed mortality of the disease in former years would be thrown upon this. Hence, from a decrease in the proportion of deaths from consumption, since the period when it used to be between a sixth and a seventh of the whole mortality, we have a right to infer that we have gained something from the use of the oil in that disease; probably that we have cured by it one in every eight cases, with the anticipation of a still larger proportion hereafter.—*Summary of Trans. Col. Phys., Philadelphia,* vol. ii. N. S.

*Upon the Anæmia of Infancy.* By Professor L. W. Ritter Von Mauthner, of Vienna.—The author remarks, that for many years the practice of venesection has been on the decline, and he quotes the words of Professor Richter, of Dresden, "Poverty of blood is, next to tuberculosis and cancer, the increasing evil of our time, which will bring down a gradual deterioration of the race, and therefore merits our most earnest consideration." According to Valentin, most neuralgic affections are caused by anæmia; and, according to Trousseau, chlorosis now prevails in the general pathology of the female. An anæmic mother will produce anæmic children; anæmia may be congenital, or acquired from too rapid development and quick growth. It is difficult to believe in the disease as congenital, the quantity of blood in the infant's tissues being normal. Valentin has shown that the amount of blood in the newly born is proportionately greater than in later life; for a child of five to six pounds has nearly two pounds of blood; while at the age of 30, it barely attains one-fifth of the weight of the body. But in infancy, as in old age, the watery constituent is more considerable than in middle life.

The cause of this so often congenital anæmia lies in the general corporeal weakness of the mother, whence also it comes that there are so many abortions and early deaths. Want of proper food during pregnancy exerts a potent influence, too commonly at work among the lower orders, oppressed with want and care; and the younger children are more subject to the disease, because the exhausted mother loses in time the power of nourising her children by her own milk, and the father has not the means of procuring a wet nurse. A child born of a mother who has suckled another infant during her pregnancy, generally suffers from poverty of blood. Losses of blood, or profuse mucous discharges, by injuring the mother's health, are to be regarded as prejudicial to healthy fœtal development. An aged or diseased father commonly begets an anæmic child. Congenital syphilis must also be regarded as a cause. The morbid change in the blood being unknown, we must be content with the term, "anæmia syphilitica." It is not always recognized, but is of most momentous importance as regards the rising generation. Should an infant affected with this disease be vaccinated, a peculiar glandular disease is apt to ensue from this second poisoning of the blood. The author proceeds to enumerate the symptoms of congenital syphilis. The child suffers from excoriations about the mouth and anus, &c.; from roseola, pemphigus, eczema, psoriasis, or from a peculiar tenuity, smoothness, and transparency of the epidermis. They do not possess power to resist external influences; they are long in teething; tuberculosis is apt to ensue in the course of time.

The anæmia of development comes on when growth at any period is very quick. Hence we have the anæmia of dentition, the anæmia of puberty, or chlorosis.

From experiments upon animals, Nasse has shown that animal diet renders the blood more coagulable than vegetable diet, and increases the number of the blood-corpuscles. From sugar and starch-meal there is formed a glutinous lymph plasma, but no corpuscles. A purely vegetable diet, therefore, is not suited for infancy; the more so, from the anatomical fact, that the cœcum, that part of the intestinal canal where vegetable digestion goes on, is but imperfectly developed at that period. Anæmic children are very apt to suffer from inflammations. Nature endeavours to excite a reaction from this depressing influence; and stasis of the blood commonly ensues in organs unfitted for active circulation; but the exudations tend only yet more to impoverish the blood; and venesections materially increase the evil. One of the evils of infantile anæmia is hæmorrhage from the congested and delicate vessels of the large intestine. This occurrence is frequently overlooked, or confounded with other disorders, such as convulsions. The author has verified the fact by dissection.

When the plastic power of the organism, says Canstatt, is exhausted by rapid natural and morbid evolutions, then tuberculosis suddenly forms, and the latent material begins to be deposited upon any excitement in the different viscera. Thus, it is to be feared during the blood-impoverishment of dentition; and it attacks especially children subject to perspirations, and to excited pulsations of the heart.

The practitioner should never forget, in considering the diseases of childhood, that sudden attacks, even death itself, may occur just as easily in children from anæmia as from hyperæmia. Thus, cases of convulsions, and other attacks, once regarded as inflammatory, require, in the present day, more careful examination and more accurate diagnosis.—*Journal für Kinderkrankheiten*, July and August, 1854, and *Med. Times and Gazette.*

*Observations on Exhaustion from the Effects of Heat* (*Coup de Soleil*). By H. F. Swift, M. D., Resident Physician of the New York Hospital.—Owing to the oppressive weather of the past summer an unusually large number of cases were admitted to the New York Hospital of what is called *coup de soleil*, or, as now regarded by the profession, extreme prostration produced by exposure to excessive heats, combined, perhaps, with the effect of receiving large draughts of cold water into the system, when overheated.

So prevalent, indeed, was this disease, that at one time it was regarded almost as an epidemic, not only in this but in neighbouring cities. Several cases occurred in the country, where, heretofore, it has seldom appeared. It will be recollected that a large per cent. of the cases were fatal. The report of the City Inspector of this city alone shows 260 deaths from *coup de soleil.*

The term *coup de soleil*, as applied to this disease, is a misnomer. It is a popular rather than a professional appellation. All our authors agree that "cerebral apoplexy" is occasionally produced by exposure to the direct rays of the sun. This I regard as true *coup de soleil.* The subject now under consideration is an entirely distinct affection. It is now almost universally admitted to be mere nervous exhaustion, produced by protracted and violent exercise in an over-heated atmosphere.

Of the large number of cases observed by me, none were strictly apoplectic, and no lesions were noticed in those which proved fatal sufficient to account for death. Those two opposite conditions, the "cerebral congestion" and "nervous debility," require opposite modes of treatment, and should be carefully distinguished from each other.

The subjects of this affection are usually labourers, who have been exposed several hours during the day to the direct rays of the sun, the thermometer being over 90°. A great majority of the following cases were foreigners, many of whom had but recently arrived in this country, and who, after the deprivations of a long passage, were ill-adapted to endure great fatigue in so high an elevation of temperature.

The same condition may result after exposure to artificial as well as solar heat. Eleven patients were attacked one morning in the laundry of one of our principal hotels; several were brought to us from a sugar refinery, where, after working several hours in a close and over-heated apartment, they fell down suddenly in a state of insensibility; and we had an opportunity of comparing their symptoms and lesions with those who became exhausted after labouring in the sun, but were unable to satisfy ourselves of any distinction.

Whatever tends to enfeeble the vital powers must be regarded as the predisposing cause. This may result from muscular debility or preëxisting disease. Heat acts as the exciting cause.

An attempt has been made to distinguish those cases which are the result of exhaustion merely, and those who have been suddenly seized after drinking large draughts of cold water when overheated either from exposure to the sun or by violent exercise. If such a distinction exists, by far the greater number of cases which fell under my observation would be included in the latter class, though only in a single instance were we able to trace any *immediate* connexion. A seaman had been employed, during the day, in the rigging of a vessel, exposed to the direct rays of the sun. At three, P.M., he complained of a severe pain in the head and a "sense of sinking within him." After drinking very freely from a bucket of water, he plunged his head into it, and immediately fell down insensible. Most of the patients had been drinking water freely during the day,—some moderately, — while others had scrupulously avoided it. But a large majority of them were attacked immediately after dinner, when probably large draughts of water were employed.

For this reason I am inclined to believe that the effect of the cold water in these cases is merely to hasten the development of the disease, and that a majority of the cases reported as deaths from "drinking cold water" are really occasioned by "solar exhaustion."

The disease is usually stated to be confined to patients of irregular habits; but only a small proportion—at least less than one-half of the following cases, could be regarded as intemperate, and many of these had restricted themselves during the day to a single glass of ale or brandy.

The premonitory symptoms are usually slight, and of short duration. A labourer may, perhaps, have been employed until a late hour the previous night, and the next morning complains of a slight headach and a general feeling of languor. He takes his breakfast with less relish than usual, but resumes his ordinary duties. But, in the great majority of cases, even these slight symptoms are wanting. They are suddenly seized, while in the performance of their labours, with pain in the head, and a sense of fulness and oppression in the epigastrium, occasionally nausea and vomiting, general feeling of weakness, especially of the lower extremities, vertigo, dimness of vision, and insensibility. Surrounding objects appear of uniform colour. In a great majority of cases this was, so far as could be ascertained, blue or purple. In one instance, everything appeared red; in another, green; and in another, white. One stated that objects retained their natural colour, but expressed them as being very beautiful, while to another everything appeared greatly magnified.

This may be regarded as the first stage of the disease. It is usually of short duration. In the milder forms of the disease, the stupor is only momentary. The patient is at first, perhaps, aroused with difficulty, but he gradually regains his consciousness. If, however, the attack is severe, the patient shortly passes into a state of coma. The skin is hot and pungent to the touch, and by actual experiment, according to the observations of Dr. Dowler, the temperature is elevated to 112° Fahr. The pupils are dilated and insensible to light; the breathing hurried and laboured; the pulse is sometimes slow and full; sometimes frequent and feeble, though the action of the heart may continue inordinately strong up to the last moment of life.

In the third stage, the symptoms are those of collapse. The pulse becomes more frequent and feeble; the respiration, which at first was hurried and laboured, now becomes stertorous, and accompanied with sighing and moaning; the skin cool, or the surface of the body may retain its natural temperature, though the head may be hot; the sphincters become relaxed; extremities cold; the countenance swollen and livid; the pupils may be dilated, but are often firmly contracted; tracheal râles appear; either the patient is quiet, as if completely paralyzed, or else convulsions, often violent in character, supervene, and he dies suddenly, or he may remain in this condition for several hours.

The first stage corresponds very nearly to that condition described by Southern writers as "solar exhaustion."

The second and third stages, described in the progress of the disease, are so intimately connected that it may seem an unnecessary division; but it is more convenient to regard them separately. They differ usually in the mode of attack, and for this reason some have regarded them as a distinct condition. The stage of collapse is most frequently noticed in those who are seized late in the afternoon, "without the signs of apoplexy," after exposure to the heat and fatigue of the day. But the same condition may occur in those who have been seized suddenly "with the signs of apoplexy," and yet pathologically there *may* be no difference.

Convalescence is usually speedy, after the severity of the disease has passed, and reaction is fully established, varying from a few minutes to five or six hours; the patient sinks into a deep slumber, and awakes somewhat exhausted, and the cerebral functions disturbed; but this soon disappears. Two patients only complained of severe pain in the head, and at intervals exhibited great forgetfulness for nearly a week; and one was occasionally delirious.

The pathology of this disease is uncertain. We have as yet failed to discover any satisfactory lesion to account for the phenomena noticed before death.

The post mortem appearances, though of a negative character, are precisely opposite those found in "congestion" of the brain or apoplexy produced by insolation—in other words, *coup de soleil*. And it is of great importance that this relation should be correctly understood, for they obviously require an opposite course of treatment. Unfortunately these two conditions are too indiscriminately called *coup de soleil*. Our nomenclature, in this respect, is imperfect, and calculated to mislead those who are unaccustomed to observe it. But we must not infer, simply because a disease has been erroneously called *coup de soleil*, that we have apoplexy to contend with. "It is debility we have to meet, and not repletion." Depletion, which is essential in the one, is almost necessarily fatal in the other.

In cases of *insolation*, the lance is often employed. But these are very rare. During the summer of 1818, there were 13 cases admitted into the hospital. These were largely bled; 60 ounces were taken from the arm by repeated bleedings; and in one case as many as 80 ounces. And the "recovery in this one was much more marked and speedy." Three of these died, and the post mortem appearances were precisely those of "cerebral congestion." But in cases of *exhaustion*, I have never seen *a patient recover* after he had been bled.

This practice is now nearly abandoned. Formerly, nearly every case treated before admission to the hospital had been bled. But not a *single patient* had been bled of those admitted during the past summer. They do not bear well even the local abstraction of blood by cupping.

The plan of treatment usually adopted is to place the patient in a hot bath, rendered stimulating, perhaps, by mustard or capsicum—or counter-irritation to the whole body by means of mustard; a stimulating enema of tr. aloes c., or, what is preferable, spts. terebinth.; ice to the head *when the temperature is elevated;* brandy and tr. capsici, or even carb. ammonia if required.

The indiscriminate use of *cold affusions* is productive of harm. Injurious and often fatal effects result from them. It is a popular and erroneous idea that a patient, as soon as he is attacked, should be completely deluged with cold water. To employ it in every case would be as absurd as in cases of collapse from any cause.

Another important consideration in the treatment of the earlier stages is *rest*. As soon as a patient is attacked, he should be placed in a horizontal position, in as cool a place as possible, and perfect rest required. Nothing can be more serious for a patient in this condition, to be carried, as is too often the case, upon an ordinary cart for a long distance, or allowed to remain exposed to the influence of the sun.—*Extracts from New York Journal of Medicine.*

*Preparation of strong Mercurial Ointment.* BY M. POMONTI, OF BASTIA.—I take fresh lard, a quarter part of the quantity to be used, and add to it a solution of nitrate of potash. The solution being mixed with the fat, I add the mercury at intervals, rubbing them continually. After a few revolutions of the pestle the mercury disappears entirely, to reappear in a few minutes afterwards, and disappears again to appear no more. Trituration for a few instants more will suffice for the complete extinction of the mercury. In this way I can make, in a very short time, mercurial ointment in which it is impossible to detect any globules of mercury, even with a magnifying glass.

The solution of nitrate of potash employed consists of six grammes (92½ grains) of the salt dissolved in a few grammes of water, which quantity is sufficient for one kilogramme (2lb. 3oz. avoirdupois) of lard.—*Répertoire de Pharmacie.*

*On Emulsions of the Gum-resins and Resins.* BY M. CONSTANTIN.—Up to the present time the gum-resins and resins have been but rarely employed, on account of the difficulty of mixing them with liquids for administration. The purification of these substances, even by means of vinegar or alcohol, has been rejected; for, as Lemery very justly remarks, it is preferable to choose gum-resins and resins free from impurities, than to purify them by any means whatever. In pharmacy we have only the alcoholic solutions of gum ammoniacum and assafœtida, and the alcoholic and ethereal solutions of tolu, which substances I have most carefully examined, and all of which, when added to an aqueous liquid, very rapidly separate, the resins floating and uniting on the surface of the liquid. But when, as is frequently the case, we have to prepare a mixture or injection containing any of the gum-resins, gum ammoniacum or assafœtida, for instance, or a resin, more especially that of tolu, which mixes very incompletely, it is, I think, of some importance to obtain a more ready and advantageous process for their admixture than any of those hitherto employed for this purpose. Among those mentioned in works on pharmacy we find the use of mucilage, or what is preferable, the yolk of egg; but these means, although very good in themselves, become tedious when adopted in hospitals, where, in a short space of time, a large number of mixtures have to be prepared; and even when yolk of egg is used, the resins above mentioned are frequently but imperfectly mixed.

Having frequently had occasion to see the gum-resins prescribed, and among them that of assafœtida, which, as is known, is a very energetic medicine, I endeavoured to find some means of shortening the process of trituration; and I think that the process that I am about to describe will be a considerable saving in point of time, and also be more efficacious for mixing the gum-resins, and even the resins. The gum-resins, will, in the first instance, claim attention, for the remarks I have to make on the resins are but a confirmation of the first-named process.

Having been called upon on several occasions to prepare mixtures and injections in which gum ammoniacum and assafœtida were used, the following was the method I employed for their preparation:—

I place the quantity of gum-resin prescribed, in small pieces, in a marble or porcelain mortar, and add about four times its weight of alcohol. I then ignite the alcohol and triturate the whole with a porcelain pestle until the alcohol has all burned away. The gum-resin acquires the appearance of a soft extract. The liquid is now added in small quantities at a time, and a perfectly homogeneous emulsion is produced, from which no separation takes place on standing, and in which the gum-resin is very completely distributed, a result which it is difficult to ensure when yolk of egg is used, even after long trituration. In this way the gum-resin is presented to the absorbent surfaces of the stomach and intestines much more effectually than it would be in the form of pill, and the action of the medicine is therefore more certain.

When the quantity of gum-resin prescribed is very large, the addition of yolk of egg will improve the emulsion, by preventing reunion of the resinous portion. A small quantity of powdered gum-arabic might also be added to the gum-resin after the combustion of the alcohol has ceased, in order to render the emulsion more perfect, but this would generally be an unnecessary precaution.

The resins afford results equally satisfactory. It is only necessary to add to them what they require to convert them into gum-resins, and powdered gum-arabic answers this purpose. To the resin, balsam of tolu for instance, twice its weight of gum-arabic is to be added, not forgetting the alcohol in the same dose as before, the mode of operating being also the same as for gum-resins. Balsam of tolu may be thus perfectly suspended, forming an emulsion, the taste of which is very agreeable, and has nothing repugnant to the patient.

As these processes are not described in any works on Pharmacy, I thought they might be deemed worthy of the notice of pharmaceutists, being simple and expeditious, and affording satisfactory results.

The heat produced by the combustion of the alcohol over the gum-resins and resins, is not sufficiently sensible to alter the qualities of the product, for although some of the aromatic principles of the medicine must be volatilized, the quantity appears to be very small, the peculiar taste and odour remaining apparently undiminished in the emulsion. The loss may be considered as almost nothing.—*Journal de Pharmacie.*

*Etherial Solution of Nitrate of Silver.*—Every one who has tried it is aware that the application of a watery solution of the nitrate of silver over a large extent of skin is a troublesome and patience-requiring process. The fluid does not dry quickly, and it runs about, being prevented, by the greasiness of the skin, from being rapidly absorbed. A plan which we see adopted by Mr. Ward in the London Hospital obviates very completely these difficulties. It consists in making the solution with the common nitric ether, instead of water. The ether acts as a solvent of any sebaceous matter which may be on the skin, and, from its volatility, very quickly dries in, producing, at the same time, a sensation of coolness very agreeable to the patients. If wished, several coatings may be applied successively to the same part with loss of but little time. The strength which Mr. Ward generally employs is eight grains to the ounce, but it may, of course, be modified according to the wishes of the surgeon. The use of nitrate of silver externally in erysipelas and other low forms of inflammation of the skin, is a very favourite practice in the London Hospitals,—either an aqueous solution, or the solid stick moistened being usually employed. Mr. Ward informed us, that the use of the etherial menstruum was not original, but had been suggested to him by a gentleman by whom he had been consulted.

*Snell on Cutaneous Anæsthesia in Lunatics.*—A lunatic received a severe injury of the great toe by the fall of a heavy piece of wood, so that the nail was torn away. The author, on examining the patient, remarked that he seemed scarcely to feel this injury, ordinarily so very painful. On examining the case more minutely, he found that this lunatic had completely lost cutaneous sensibility. This circumstance led him to examine all the lunatics in his establishment, and he found that out of 180 insane persons (100 males and 80 females), 18 (17 males and 1 female) had complete anæsthesia of the skin; and that in six others, who were males, ths sensibility to pain was very much decreased.—*Monthly Journal,* from *Zeitschrift für Psychiatrie.* X, 2.

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## RICHMOND HOSPITAL.

### *Case of Popliteal Aneurism, treated, in the first Instance, by Compression, and afterwards by Deligation of the Femoral Artery; secondary Hæmorrhage; and subsequent Ligature of the External Iliac Artery.*

BY EDWARD HUTTON, M. D.,

SURGEON TO THE HOSPITAL.

*Reported by* MR. EDMUND M'DOWEL.

Daniel Connor, aged 46 years, by trade a pipe maker, was admitted into the Richmond Hospital, April 22, 1854.

The patient was a rather muscular man, and of not unhealthy appearance; he stated that, although not an habitual drunkard, yet at times he lived rather freely.

Nearly four months previous to admission (in January, 1854), after a fit of drinking he felt pain and stiffness in the left knee, which came on without any assignable cause. A month later he, for the first time, perceived a pulsating tumour in the left ham, about the size of a walnut. The pain now extended down the leg to the great toe. The tumour continued slowly to enlarge until a fortnight before admission, when its increase in size became much more rapid; in two weeks it doubled its former dimensions; the leg became swollen and œdematous, and the pain, which extended from the ankle to the great toe, was very considerable. On admission the tumour was found to fill the entire popliteal space, and to project on the inside of the thigh; its surface was irregular, and over the whole of it pulsation was to be felt, but more distinctly over the outer part, where the coverings seemed thinner. Pressure for a moment being applied to the femoral artery, the tumour ceased to pulsate, and became much less tense, but did not collapse; its contents seemed to be in great part solid. On remitting the pressure a distinct thrill was communicated to the hand, the tumour again became very tense and pulsating, and yielded a well marked "bruit de soufflet" to the stethoscope. There was œdema of the foot and leg; the integuments were tense and shining, and large veins were observed to ramify over the surface of the limb. No sign of disease could be detected in either the heart or the aorta.

The following were the measurements:—

Circumference, two inches above the knee, left, 15¾ inches, right, 13¼ inches; round the knee joint, left, 16¼ inches, right, 13¾ inches; round the calf, left, 14¼ inches, right, 13⅛ inches; round the dorsum of foot, left, 10½ inches, right, 9½ inches.

April 23rd.—Dr. Hutton finding that the aneurismal tumour contained so considerable a quantity of fibrine or solid matter, resolved to try compression, and the rapidity with which the tumour had recently enlarged indicated the necessity for avoiding delay. Dr. Carte's instrument was applied to the femoral artery in the groin, the compressing force being moderated by narrowing the elastic bands to less than half an inch. When the compression had been maintained for an hour and a half, it became necessary to apply a second clamp lower down, and to relax that first applied. By the alternate use of these two clamps, and by the administration of anodynes, the compression was patiently borne for nine hours. On relaxing it the pulsation returned, but the tumour felt firmer.

He complained a good deal of the pain, but bore it with resolution and fortitude. The compression was now maintained by one or the other clamp for nearly thirty-two hours longer, when the pulsation in the tumour was found to have ceased, but a slight murmur was audible. The compression was therefore continued six hours longer, at the end of which time neither pulsation nor murmur was perceptible, and it became necessary to remove the instruments from the congested state of the limb. After another interval of six hours the murmur before mentioned was again audible, but the patient complaining of want of sleep and exhaustion the clamps were not reapplied.

On the next day compression, by means of a weight, and afterwards by the hands of assistants, was tried, but could not be borne. Vesications were observed both in the groin and thigh, and the pulsation in the tumour returned.

April 27th.—A consultation being held, it was agreed that the treatment by compression was no longer feasible, and that we should only await the subsidence of the congestion and swelling of the limb, caused by the pressure, to place a ligature on the femoral artery. The patient was bled from the arm to ten ounces, and the limb was frequently fomented.

On the 28th the patient complained of pain in the heel, and, on examination, a dark-coloured vesicle was found on its under surface, where it had rested on the bed.

April 30th.—The swelling of the thigh being much reduced, and there being no febrile disturbance, a ligature was put round the femoral artery in the usual place (Scarpa's angle) whilst he was under the influence of chloroform. The opening made in the sheath of the vessel was very small, and the artery appeared healthy.

On the next day (May 1st) there was some swelling about the wound; the pulse rose to 100, the skin was hot, and the bowels confined.

On the 6th of May the report was, pulse 96, soft and regular; tongue moist and becoming clean; no thirst, appetite good, bowels regular. The wound appears a little sloughy at its lower part.

May 8th.—Pulse 84, and regular. His general condition is as last reported. The discharge from the wound is rather copious and fetid; the slough is separating rapidly. By measurements taken it appears that the circumferential dimensions of the limb are everywhere lessening. Temperature between the toes of the left (the affected foot) is 83°; of the right, 77°.

May 10th.—Pulse 86; bowels regular; the slough has nearly separated from the lower part of the wound, its upper third has united, the discharge is more healthy, but still considerable. His general health continues to be very good.

On the 12th of May, measurements indicated further reduction of the aneurismal tumour; the left leg was not now more swollen than the right. Temperature between toes of left foot, 93°; right foot, 94°.

May 13th.—Hemorrhage to the extent of about four ounces of dark-coloured blood took place. It was readily stopped by means of lint compresses and cold applications; discharge from wound sanious.

May 16th.—Pulse 86. His general health good; the wound looking well, and again discharging tolerably healthy looking pus.

May 17th.—This morning, at one o'clock, smart hæmorrhage took place, so as to induce syncope; the bleeding was arrested by pressure above and below the seat of the ligature. Pulse 104 and irregular, countenance pallid.

May 19th.—There have been occasional gushes of arterial blood, with some oozing from the wound, since last report; to control this hæmorrhage constant pressure with the fingers on the external iliac artery was requisite. It was evident that the hæmorrhage could not be arrested without placing a ligature around the artery above the wound, and Dr. Hutton proceeded to tie the external iliac artery at half past four o'clock, P. M., this day. Chloroform was not administered, owing to the anæmic condition of the patient. The operation performed was that recommended by Sir Astley Cooper. After the operation an anodyne was given.

May 21st.—Pulse 112; tongue moist. Does not sleep well, owing to startings in the muscles; has slight cough and expectoration; occasionally complains of a burning pain in the foot, yet to the hand the limb feels of normal temperature.

Temperature of the right foot, between the toes, 93°; of the left, between the toes, 90°.

May 22nd.—Some hæmorrhage took place again to day from the wound in Scarpa's angle, and is controlled with difficulty by pressure of the fingers. Pulse 108, weak.

May 23rd.—Hæmorrhage still occurring at intervals when the pressure was discontinued. Dr. Hutton separated the lips of the wound corresponding to the femoral artery, and removed the contained coagula; the ligature was found to be detached from the artery and was withdrawn; the wound was then dressed from the bottom with sponge dipt in a solution of muriate of iron, and a graduated compress of lint was secured by a broad piece of splint board, and a bandage so adjusted as not to interfere with the collateral circulation. The hæmorrhage was thus effectually controlled. Pulse 136, weak and fluttering; countenance anxious.

May 25th.—Pulse 118; tongue cleaner. The wound corresponding to the external iliac artery looks healthy; discharge from that in Scarpa's angle very fetid and sanious. Sleeps tolerably well; does not complain of pain except from the startings of the limb; abdomen tympanitic. Ordered—

Infusi sennæ, ℥vi.
Mannæ, ʒiv.
Tart. potass. et sodæ, ʒii.
Tr. cardamomi,
Tr. aurantii, āā, ℥ss. M.
Ft. mistura.

A tablespoonful to be taken every hour till the bowels act.

May 26th.—The bowels had been moved; he had slept well; pulse 108 and fuller. In other respects as at last report. The splint-board removed.

May 29th.—He seems to be improving in his general condition. The wounds as before reported. Temperature, between the toes of right foot, 96°; of the left foot, 86.

June 1st.—Pulse 120; tongue clean; bowels moved freely. The upper wound looks healthy, from the lower a large piece of sponge was to-day withdrawn, and from it there continues a copious fetid discharge; complains of pain in the left knee, extending to the ankle; and also of what he describes as "a burning pain" in the foot, to relieve which a belladonna liniment was ordered.

June 6th.—Pulse 120; discharge from the lower wound more healthy; the upper wound granulating favourably; there is no sign of the ligature of the external iliac coming away; is restless, and complains of pain in the left knee, beneath the patella; and also of pain extending down the limb to the heel. Notwithstanding the means taken to avoid it, a slough has appeared on the side of the heel, where there was, as before noticed, a dark-coloured vesication. The application of the liniment of belladonna to the leg afforded much relief to the pain complained of. He takes bark mixture in effervescence. Temperature of the right foot, between toes, 96°; of the left foot, 86°.

June 10th.—This evening he complained of rather acute pain in the left knee, and on examining the joint there appeared to be some effusion into it; also slight œdema of the limb. The wound in the iliac region is going on well; that in Scarpa's angle is granulating, and discharging healthy looking pus. Temperature, right outer ankle, 99°; left outer ankle, 98°.

June 13th.—Pulse 120, and weak; the tumour in popliteal space seems to be suppurating.

June 17th.—Pulse 130; tongue dry and rough; skin hot. For the last ten days the patient has declined; feverish at night; appetite bad; spirits depressed. The tumour in the ham was found to present a sense of fluctuation, and, on being opened, a pint of very fetid pus, mixed with blood and air, was evacuated. The slough on the heel shows no tendency to separate; both wounds in the situation where the arteries were tied look well. The patient has been removed to No. 6 Ward.

June 20th.—The ligature of the external iliac artery came away yesterday (thirty-two days after its application). The ulcer over Poupart's ligament, arising from pressure, has cicatrized. The wound in Scarpa's angle is still granulating, but the discharge is less healthy; the last piece of sponge has been removed from it. There is a free discharge of dark-coloured sanious matter from the incision in the popliteal region. The slough on the heel is large, and inclined to spread. Since his removal into No. 6 Ward, and since the incision into the popliteal space, his general condition seems somewhat improved. Temperature, between the toes of right foot, 99°; between the toes of left foot, 94°; right inner ankle, 99°; left inner ankle, 99°.

July 3rd.—Since the last report there has been little change, until to day; pulse 140, feeble; appetite bad; slept badly last night, notwithstanding the administration of an anodyne; tongue dry and furred; skin hot. There is an erysipelatous blush round the wound in Scarpa's space.

The discharge from the abscess in the ham is fetid and dark-coloured; he complains of much tenderness and pain in the joint. The slough on the heel is separating; ordered bicarbonate of ammonia in effervescence.

July 9th.—No improvement, pulse 128, feeble; appetite gone; sordes on the teeth; mind wandering; evacuations passed involuntarily. There is an erysipelatous blush on the left knee, extending downwards to the ankle. The slough on the heel has separated, but others are forming on the dorsum of the foot, and above the external malleolus. The wounds in the thigh, and above Poupart's ligament, present no unfavourable change; the latter, indeed, has cicatrized, except a very small portion (the size of a small pea) remains unhealed. Discharge from the ham copious and fetid.

July 13th.—He appears to be sinking; pulse very weak and intermitting; countenance vacant; he is quite unconscious, and occasionally mutters incoherently; sloughs on the left foot extending. He has to-day a troublesome cough, and diarrhœa.

July 17th.—The diarrhœa cannot be effectually controlled; the sloughs on the foot are extending.

[Dr. Hutton now left Dublin for the Continent, and the charge of the case devolved upon Professor Smith.]

July 24th.—There is now one continuous slough, extending from the small toe to within five or six inches of the left knee-joint, on the outside of the limb; the whole of the plantar surface of the left foot is destroyed, and gangrenous spots are appearing on the toes. An abscess on the inside of the patella has burst, and discharges a large quantity of pus. The wound, where the femoral artery was tied, has filled up and is cicatrizing.

August 6th.—Diarrhœa still continues at intervals; emaciation very great; countenance of a leaden hue; pulse 130, almost imperceptible; dyspnœa considerable. There is complete disorganization of the knee-joint, so that the tibia is displaced from the condyles of the femur. There is a large ulcerated surface corresponding to the inner condyle of the femur and head of the tibia, through which these bones protrude; there are also perforating ulcers on various aspects of the joint which discharge fetid pus; gangrene is extending up the limb; it at present occupies in breadth about two-thirds of the leg, and the whole of the foot, with the exception of a small band on its inner aspect, and extends from the toes to within about three inches of the knee. The wound, where the femoral artery was tied, was completely cicatrized.

August 7th.—The patient died this morning, 108 days after admission, 101 after deligation of the femoral artery, 80 after that of the external iliac.

*Post-mortem Examination.*—The state of the limb was as described in the last note of the case taken during life. The main artery, extending from the common iliac to the popliteal, where it had been altogether lost by sloughing, and its continuity interrupted, was carefully removed after death. A firm coagulum occupied the external iliac artery from the seat of the ligature to within an inch of the internal iliac, and also to the extent of half an inch below the place of the ligature. Here the artery presented an ulceration at the anterior part where the ligature had last been detached, whilst the posterior part had its continuity restored, but was ligamentous. In the former locality the upper coagulum did not adhere closely to the artery within half an inch of the seat of ligature, but higher up the artery was completely filled with a coagulum which adhered. Below the lower coagulum the artery was pervious to one inch beyond the origin of the profunda, it was then obliterated to the extent of three inches, when it again became pervious, and continued so until it arrived at the commencement of the popliteal space; here it was closed. The iliac and femoral veins were quite healthy; no disease existed in the heart or in the coats of the arteries.

*Remarks.*—In the foregoing case the treatment by compression seemed to be warranted by the facts that the contents of the aneurismal sac were in a great part solid, that the circulation was tranquil, the artery easily compressed, and the patient resolute. On the other hand, the large size of the aneurismal tumour, its recent rapid increase, the tumefaction of the leg, and the distended state of its veins, rendered the result of this treatment more doubtful than in less advanced cases of popliteal aneurism. The cessation of pulsation, and of all murmur, after forty-eight hours of compression, appeared to justify the attempt. On the return of these symptoms, however, this plan of treatment was no longer feasible, for the reasons stated in the record of the case, and we awaited only the subsidence of the temporary congestion caused by the compression to place a ligature on the femoral artery.

This object was affected by venesection, rest, fomentations, &c., in about four days, and the operation of tying the femoral artery in Scarpa's space was then performed. The artery appeared to be healthy. On the fourteenth day after the operation, although the wound looked well, and that part of it around the ligature had united, secondary hæmorrhage took place, at first easily controlled, and thought to be venous; but in four days afterwards arterial blood escaped, and was arrested with difficulty. In consultation it was agreed that a ligature should be placed around the external iliac artery, which operation was performed without delay. After this hæmorrhage did not recur for two days, but on the third day arterial blood flowed freely from the upper portion of the femoral artery, at the seat of the ligature; this was found lying loose in the wound.

The hæmorrhage was not easily controlled, and it became necessary to break through the adherent granulations over the artery, and to apply a graduated compress directly to the trunk of the vessel. This was so applied as to impede as little as possible the collateral circulation. There was no more hæmorrhage after this period, but the patient was much exhausted and dispirited by the previous loss of blood and recurrence of the hæmorrhage, and the pain caused by the means necessary to arrest it. From the notes of the case it appears evident that its unsuccessful issue did not depend upon the want of a supply of arterial blood to the limb; for at the time the ligature separated from the external iliac artery, the temperature of the left foot, between the toes, was 94°; of right foot, 99°; and of both ankles, 99°.

But the patient's death was the result of general exhaustion from previous hæmorrhage, suppuration of the wound in the thigh and of the aneurismal sac, but chiefly of typhoid erysipelas, during which attack he appeared to be moribund; nevertheless he survived, to be borne down ultimately by diarrhœa, gangrene of the foot and leg, and disorganization of the knee joint. No opportunity was afforded for amputation at any time after a reasonable hope of saving his limb was abandoned. There is no doubt that if this operation had been performed in the first instance his life might have been saved; but few surgeons of the present day would have proposed this under the circumstances of the case.

## ST. VINCENT'S HOSPITAL.

### DR. O'FERRALL'S

CLINICAL WARDS.

### *Lead Colic cured by Iodide of Potassium; Remarks.*

The patient, Joseph Gardiner, a house-painter, now thirty-one years old, was in St. Vincent's Hospital two years ago labouring under lead colic, and was treated successfully by minute doses of calomel repeated every hour for twelve doses, and then followed by a full dose of oleum ricini. Since that period he has constantly been occupied at his trade.

September 26th, 1854.—He was now re-admitted into hospital, complaining of all the symptoms of lead colic in an aggravated form. He had the unhealthy sallow tint so frequently seen in house-painters. On examination the dental margin of his gums was found to present the characteristic blue line first described by Dr. Burton, and which is familiar to every hospital physician.

His sufferings consisted in severe aching pain through the abdomen. It was sufficiently constant and torturing to prevent sleep. He had a worn and wretched expression of countenance, and all his movements conveyed the idea of despondency as well as pain. The bowels were constipated, the renal secretion was high-coloured and in rather small quantity.

He reminded those who saw him of the relief afforded him on a former occasion, and the treatment before alluded to was accordingly commenced.

Two days afterwards he was in all material respects unrelieved, although the bowels had been freed. Dr. O'Ferrall, therefore, directed the following:—

℞ Iodidi Potassii, ℈iv.
Liquoris Potassæ, ʒii.
Aq. distillat. ℥vii.
Syrupi Aurantii, ℥i. M.

A dose to be taken every second hour.

The first dose to be half an ounce, and every succeeding dose to contain half an ounce more than the former.

Dr. O'Ferrall directed that the urine be tested for lead before the commencement of the treatment, and every day afterwards, in order to detect the presence of the poison, when eliminated in its new combination.

The next morning the patient reported that he had slept comfortably, and was free from pain. His bowels had not been moved since he began the new medicine. He now rapidly recovered his health and spirits, and in five days after the commencement of the iodide treatment the blue line on the margin of his gums was no longer to be discovered. The seventh dose, containing thirty-five grains, was the maximum dose of the medicine.

This dose was continued for several days at intervals of six hours, merely to ensure the permanence of his cure. The bowels no longer required aperients; his appetite returned, and he had, on leaving the hospital, all the appearance of renewed health and cheerfulness.

*Remarks.*—Dr. O'Ferrall remarked that he had rarely seen a case, in which the beneficial agency of a medicine was more unequivocally acknowledged by the patient. His spirits revived after the fourth dose, and the pain became sensibly diminished. The dejection of spirits which accompanies the pain in lead colic is quite remarkable. Nothing gives satisfaction, nothing seems to inspire hope, as long as the morbid influence prevails. There is, really, more despondency, and more dejection, than would seem to belong to the degree of pain endured. The specific action of the poison thus seems to modify the cerebral functions, at the same time that it is more painfully localised in other portions of the nervous system.

In Gardiner's case, the remedies formerly successful, and which in the latter attack removed the constipation, failed to relieve the distress and suffering of his complaint. The iodide of potassium, which exerted no purgative action whatever, was almost immediately followed by relief. It was also worthy of recollection, that his whole aspect became improved; and that the peculiar and it might be called pathognomonic appearance of the gums disappeared in a few days.

It was to be regretted, that by some accident the analysis of the urine was not continued as directed; the absence of lead was ascertained, before the iodide of potassium was administered. But the progress of elimination remains to be verified in the next case presented for observation. The fact, however, seems to be unquestionable; the researches of Dr. Swift and Dr. Outram on this subject, in the New York Hospital, are entitled to the fullest credit. It would have been more satisfactory to have confirmed, by experiment, the *rationale* of the action of iodide of potassium in the present instance; but the cure was certain, and the result is, therefore, not less important or less available to the practitioner as a clinical fact.

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## Case of compound Poisoning by Atropia and Opium; Stimulation by Firing; Recovery.

### BY DR. CORRIGAN,

PHYSICIAN IN ORDINARY TO THE QUEEN, IN IRELAND, ETC., ETC.

Cases of poisoning by belladonna, either from its berries being eaten, or from the extract, preparation of its leaves, or from its root, are not very rare;

but instances of poisoning from atropia are, and must probably ever be rare, and of compound poisoning from atropia and opium still more rare; and, therefore, it may be desirable to place the following case on record.

At a few minutes before 8 o'clock, A.M., I saw Mrs. R—y, æt. about 50; she was lying in bed, and at first sight apparently comatose; her eyes were closed; on raising the upper eyelids, the eyeballs were not turned up, but appeared to look straight out; the pupils were very much dilated, the iris of each eye appearing like a mere ring. The conjunctivæ were not in the slightest degree congested, nor was there any congestion of the countenance; there was no froth about the lips. The face and general surface were warm. The muscles of the back of the neck were rigid, but there was no spasm in any other muscles. I could not rouse her by shaking or pinching, but on lightly and repeatedly touching with the back of a heated silver spoon the skin over the sternum, epigastrium, and cardiac regions, she applied her hands quickly and momentarily to the pained parts, just as one might do in sleep, without awaking, when any part is touched. This appears to be peculiarly connected with poisoning by belladonna; and these automatic movements have been sometimes carried so far as to make the person affected assume the appearance of a somnambulist. Her respiration was natural; the pulse 96, and in no way remarkable. It is scarcely necessary to observe, after describing the above movements, that there was no paralysis either of extremities or face. While examining her, she vomited some bilious-looking fluid, and I then gave her a little eau-de-Cologne and water. The first spoonful she swallowed with little difficulty. The second was much longer in being swallowed. The account I received was this: Mrs. R. was to have taken an aperient draught at five o'clock in the morning; by mistake one half of a bottle containing Wilde's solution of atropia, which she had been using for her eyes, was given instead of the draught. The contents of this bottle were—

Solutionis atropiæ (No. 1) ʒ ij.
Vini opii ʒ iij.
Aquæ laur. ceras. ʒ ij.
Aquæ distil. ʒ i. M.

As two drachms of Wilde's solution of atropia contain two grains of atropia, Mrs. R. took, therefore, at one dose, one grain of atropia with one drachm and a-half of vin. opii, being equal to about four and a-half grains of opium. At 6 A.M., one hour after she had taken the draught, her maid went into the room; Mrs. R. was muttering in her speech; said, as well as she was able, that she feared she had taken the wrong bottle, that she feared she had got a paralytic stroke, that she felt it in her head and face, and that she wished to rise to try if she could walk. Almost immediately after, she became stupid. Mr. Kavanagh saw her in half an hour afterwards; she muttered unintelligibly. He gave her an emetic which soon acted. For a little time after its action she spoke more intelligibly, but soon relapsed into her previous state; occasionally her breathing became stertorous, but slightly so, and only for a moment. Blisters were applied to the forehead, mustard cataplasms in succession to the thighs and legs, and a turpentine injection administered; and three grains of carbonate of ammonia given every half hour, and a teaspoonful of brandy every hour. At half past twelve o'clock I saw her again. The countenance had become pallid. The eyes were as before. She could not be roused by any ordinary means, but on again having used the heated spoon as before, and making the application over the legs and thighs, there was a sudden change. She drew up her legs repeatedly, and in reply to questions, and with the manner of one awaking from deep sleep, said she was better, stretched out her hands before her, and assisted herself to sit up; her pulse was 100, and her breathing became quite natural. The lavement not having acted a fœtid enema was exhibited, and the ammonia and brandy continued as before. In the evening she was quite conscious, but seemed like one who had awaked from a dream; had quite forgotten everything that had occurred, and on next day the only trace remaining was, the dilatation of the pupils, which remained for at least a fortnight afterwards.

The above case is a good example of what is called "compound poisoning" by Christison, a subject in toxicology of extreme interest, and surrounded with great doubt and difficulty. In such cases, as observed by Christison, it would appear "that poisons of opposite qualities, given about the same time in large doses, will disguise one another's effects, or impede or perhaps even prevent them, in a manner which renders such a combination of circumstances an important subject of inquiry for the medico-legal toxicologist." Christison's observation is remarkably borne out by the particulars of the case above narrated. The opium appears to have prevented the irritation of throat, the wild or extravagant delirium and convulsive twitching which are generally produced by belladonna, while the atropia, on the other hand, prevented the contraction of the pupils and profound coma, which might otherwise have followed on the over-dose of opium. Of antidotes for the narcotico-acrid poisons we know nothing, and therefore, in the treatment of such cases, our efforts must be directed to getting rid as quickly as possible of the poisonous substances, and preventing the continuance of sleep or stupor. For the latter purpose, walking the patient about the room, and dashing with cold water, are the usual remedies recommended. I do not recollect having seen anywhere firing over the surface recommended; and yet, as seen in Mrs. R.'s case, its effects were remarkable; and I would, therefore, propose it as an addition to the means usually employed. The patient soon becomes accustomed to the stimulus of mustard, but it is not so with regard to firing. Not having with me a firing-iron at the time of my first visit, I substituted a silver spoon, touching different portions of the surface in quick succession with the back of the heated spoon; but even if the firing-iron were at hand, I would recommend the silver—silver is so much a better conductor of heat, and gives out its caloric so much more rapidly that its touch is more suddenly painful, and therefore more exciting than the application of the firing-iron. I observed this in having used and seen a silver spoon used as a substitute for the firing-iron, in other cases where the patient, who bore the application of the iron without complaint, cried out with agony on the skin being touched with the heated silver. The spoon can be sufficiently heated for such a case as here narrated, by holding the bowl of the spoon for an instant in the flame of spirit on fire in a saucer, or even over the flame of lighted paper. It is scarcely necessary to observe, that for the object required—the interruption of stupor—the touch should be so light as merely to cause a quick and painful sting, and should not be allowed to produce vesication. As it may be most useful to be aware in such cases of every mode of arousing the patient, and particularly where there may not be a sufficient number of attendants to keep the patient walking about or otherwise roused, I will mention here another most effectual mode of breaking stupor, which I once saw practised, and with success. It was simply pricking the patient on the calves of the legs and on the ribs with a large pin each moment as he relapsed into stupor; it was not difficult to get an attendant to carry on the process, which was most effectual in arresting the stupor, that would otherwise have ended in coma and death.

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## COUNTY GALWAY INFIRMARY.

### *On Dislocation of the lower Jaw in a Direction upwards and backwards, with Observations.*

BY CROKER KING, M.D., F.R.C.S.I.,

PROFESSOR AND EXAMINER IN THE QUEEN'S UNIVERSITY IN IRELAND, ETC., ETC.

The above title may cause some surprise to the experienced surgeon, for an injury is mentioned of which the annals of surgery do not contain a single instance; and the compilers of the various systems of surgery, or of surgical anatomy, agree unanimously in stating, not only that such an accident has never occurred, but further, that for certain reasons, which it is unnecessary here to enter into, an injury of the kind is an anatomical impossibility; nevertheless, as the following pages will testify, it has happened, and is now in the nineteenth century recorded for the first time. The particulars of the case are as follows:—

On the 3rd of September, 1851, at three o'clock in the afternoon, a boy named Peter M'Dermott, aged eight years, in endeavouring to climb over a wall composed of loose stones, fell, and was struck in the face by a large stone.

On being lifted up, it was observed that he was severely injured, that his features were much distorted, and that blood flowed from his left ear.

Surgical assistance was immediately obtained, and repeated attempts were made to relieve the patient, but being ineffectual, he was brought to the Infirmary, and was first seen by me at half past ten o'clock at night, seven hours and a-half after the receipt of the injury.

The deformity was remarkable, and gave an uncommon cast to the countenance; this was evidently caused by the peculiar position of the chin, which was depressed and retracted. The parents were greatly distressed at the accident which had happened to this their favourite child. The father prophesied that he would be an object for life; the mother said his face resembled a pig's, and declared that if the deformity could not be removed, she would far prefer that her child should die. The following was the state of the case when admitted into the Infirmary.

The chin was much retracted; the mouth was open, and saliva poured from it. Articulation was so indistinct, that what the boy attempted to say could not be understood. The chin was pointed to the left side, and on pressing it upwards the patient appeared to suffer much pain, but the mouth could be closed; and it was now observed that the internal tubercles of the inferior molar fell outside of the external tubercles of the corresponding teeth of the upper jaw, and that the lower incisors were at least one inch *behind* the upper. No *fracture*, though assiduously sought for, could be found, and the appearances were very different from those which I would have expected to meet in any form of dislocation with which I was acquainted.

The pointing of the chin to the left side, and the position of the inferior molars, might occur from dislocation of the right condyle in the usual direction forwards; but the injury was altogether confined to the left side; and, moreover, the right condyle lay undisturbed in its socket; and lastly, in the event of the above luxation having occurred, the chin would be unusually prominent, and the lower incisor teeth in *advance* of the upper, whereas in this case they were situated one inch *posterior* to them.

The diagnosis of the case appeared to be surrounded by unusual difficulties. So much so, that I came to the conclusion, that it would be injudicious, and perhaps injurious, to attempt mechanically to afford relief, until I had formed some definite notion of the nature of the injury.

On maturely considering all the circumstances of the case, I formed the opinion, that in the absence of fracture of the ramus or neck of the bone, the peculiar position of the teeth could only be produced in the event of the left condyle of the jaw having left its socket, and having passed in a direction upwards and backwards.

This conclusion was at variance with my former experience, and with the records of surgery. My anatomical knowledge arose in rebellion against it; and I proposed to myself the question, how could such a displacement occur? A moment's consideration satisfied me that I had possibly solved the difficulty. It occurred to me that the condyle might pass in the above direction, if the dislocation were preceded by a fracture of the inferior maxilla, near or at its symphysis; this would allow the arms or sides of the bone to separate, and thus permit the condyle to be driven, in the first instance, outwards, and, subsequently, upwards and backwards.

I now returned to the case. On examining the line of the lower teeth with greater diligence, it still appeared quite perfect; no irregularity or fracture could be detected; however, on grasping the bone on each side of the symphysis, although there was not any apparent displacement, nevertheless I could detect a hinge-like motion, which enabled me to separate the curved sides of the jaw from each other, just as if they were united by cartilage.

I now felt confident that the diagnosis at which I had arrived, by a process of reasoning, was the correct one, and I proceeded to treat the case accordingly.

Having wrapped a napkin around the thumb of my right hand, I placed it as far back as I could on the inferior molar teeth of the injured side, and exerted pressure in a direction downwards, at the same time that I drew the jaw forwards. I distinctly felt the bone to descend, to move forwards, and then with a jerk and a snap the condyle to re-enter the glenoid cavity. In an instant all deformity was at an end, the teeth fell into their proper position, the mouth closed, the child could articulate distinctly, and the peculiar expression of countenance vanished.

*Remarks.*—It may be asked what was the nature of the injury of the lower jaw which caused it to yield with a hinge-like motion; was it what has been described as the "green stick fracture;" I should say it was not, as in the latter case of incomplete fracture, the injury would, in all probability, have been apparent in a bone so lightly covered as the inferior maxillary. But might it not have been that the union of the lateral halves of the bone, which usually takes lace within the first year after birth, had not yet been accomplished?

We should also remember that in a great number of the lower animals this consolidation never takes place, and that the condition which presented itself in the above case may have been one of those many instances where the permanent condition of one of the lower animals is represented by an *arrest of development* in the human subject.

It is not easy to conceive how violence applied, as in the above case, should have caused this peculiar displacement, which appeared for its accomplishment to have required so many impulses, all acting in methodical succession: first, the forcible expansion of the parabolic curve of the inferior maxillary bone; and secondly, the upward and backward direction of the condyle.

But when we consider the extraordinary and eccentric effects which occasionally result from external injury—take, for example, gunshot wounds, where the projectile has been known to pass into the most unexpected and remarkable positions—we need not feel surprised at the nature of the above injury, unique though it be.

In detailing the particulars of the above case, I stated that before the deformity was relieved the form of the face was very peculiar, and the expression so anti-human that the mother drew a comparison between her child's face and that of a pig.

I do not look upon this ideal comparison solely as the emanation of an uneducated mind, but rather as an instance of the occasional happy manner in which the lower order of Irish graphically express themselves.

I do not mean to say that the child's face at all resembled a pig's; but I agree with the mother so far that the expression of the countenance was more animal than human.

In connexion with this subject an interesting question presents itself, why should this peculiar deformity, this position of the inferior maxillary bone, so far degrade the human countenance as to impart to it an animal character? Physiology and comparative anatomy afford a solution of the problem.

I believe I am correct in stating that in man *alone* the profiles of the superior and inferior maxillary bones and teeth are *vertical;* in all other animals, even in man's nearest relative, the chimpanzee, the profiles meet at an *angle;* consequently, if this be true, the vertical direction of these bones and the teeth becomes a peculiar feature of human expression, and common observation teaches us that the most beautiful and exquisitely formed human mouths are constructed upon this plan, and that, on the contrary, nothing detracts so much from human expression as an undue prominence of the superior maxilla and projection of the teeth. A mouth so constructed appears merely subservient to mastication and the meaner necessities of animal life; and if, in addition, the chin, instead of being vertical, should pass in a direction backwards and downwards, all dignity is lost, and the expression of the face is brutish in the extreme. If eloquence, sentiment, or impassioned speech should proceed from such a countenance, we are surprised. We wonder that wisdom should be so curiously garbed, and that there should not be more accordance between the configuration of the body and the lineaments of the mind.

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## HOSPITALS OF THE DUBLIN WORKHOUSES.

### *Local Anæsthesia.*

BY PETER SHANNON, M.D.,
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The disease called by Mr. Wardrop* "Onychia Maligna," is universally admitted to be an exceedingly painful affection, and the difficulty experienced in curing it by simple means has also been fully acknowledged by those who have written upon the subject.

The first surgeons of the day in France as well as in these countries, have from time to time proposed various methods of relief for this disease, some of these methods being by operation and others by local applications or by constitutional treatment.

Of the many plans proposed, some had the undoubted merit of curing the disease effectually, but with the grave objection that they were extremely severe. Others proved to be sometimes effectual and sometimes a failure; but, as they always inflicted the most poignant sufferings on the patient, their claims to the confidence of the profession were questionable; whilst a third class possessed the great advantage of being painless, but with the very serious drawback that they were not always successful.

Dupuytren's operation† by excision was perfectly successful, but always fearfully severe; the various caustics, such as nitrate of silver in powder, nitric acid, &c., were sometimes unsuccessful, and always produced the most excruciating torture; and the mercurial plans of Wardrop and Colles‡ (the former through the medium of the constitution, the latter by fumigation of the sore) sometimes failed to cure.

Since the introduction of anæsthetic agents into surgical practice, three cases of this disease have been placed under my care in the Workhouse Hospitals, and after a prolonged and patient, but ineffectual trial of other remedies (fumigation by the mercurial candles amongst the rest) Dupuytren's operation was performed in all of them with the most perfect success. In two cases, chloroform was used with highly satisfactory results, perfect anæsthesia having been produced during the operation, and a perfect cure having rapidly ensued.

The repeated occurrence of fatal accidents from the use of chloroform (even when carefully exhibited) has, however, of late, raised in my mind weighty objections against the employment of this potent agent in the minor operations of surgery; and therefore, the proposal of substituting local anæsthesia in such cases for the inhalation of chloroform was hailed by me as a great improvement in practice.

A suitable case having lately presented itself, I therefore determined to submit this new plan to a trial, and as the result was highly satisfactory, I now beg to lay the particulars of the three cases before the profession.

CASE I.—John Green, aged twelve years, was admitted into one of the hospital wards South Dublin Union Workhouse, on the 13th of August, 1852. He had received a severe bruise from a stone on the thumb of his left hand some time previously, and the extreme or distal phalanx was now enormously swollen, greatly inflamed, and exquisitely painful. The original nail had nearly disappeared, and its place was occupied by a foul, irregular, ulcerated surface, on which several small portions of discoloured nail grew irregularly. Towards the extremity of the thumb, a portion apparently of the original nail still retained its hold.

The size of the thumb, as compared with its fellow, was enormously enlarged, the integuments covering the pulp of the thumb were of an erysipelatous colour, and the ulcer situated upon the dorsum was circumscribed behind or towards the joint by a sharp, elevated, jagged, semicircular border, evidently corresponding pretty nearly to the cutaneous depression in which the root of the nail was originally lodged.

This poor boy's sufferings were extreme; he was naturally strong, and intelligent for his years, but the pain entailed upon him by the slightest touch had so completely overpowered him, that it was with the greatest difficulty he would allow the part to be examined.

What remained of the original nail was removed entirely by the forceps, and a soothing plan of treatment was at first adopted, with the view of reducing the excessive inflammation.

It is unnecessary to detail the numerous local applications used from time to time with this boy; suffice it to say, that mercurial fumigations had a fair trial; that the part was touched freely with nitric acid, which produced the most exquisite pain, but failed to effect a cure; that his constitution was supported by good, nutritious food and by tonic medicines, rendered necessary by the prolonged irritation to which his system was subjected both by the disease, and by the severe remedies employed; and that finally on the 26th of December, the following operation was performed:—chloroform having been inhaled until perfect anæsthesia occurred, a deep semicircular incision (the concavity towards the point of the thumb) was made a short distance behind the ulcer on the dorsum; the distal edge of the incision was seized forcibly in a forceps, and then, by a few strokes of the knife, a regular flap was raised from above, downwards; including, of course, the whole depth of the matrix, and comprising all the ulcer with the diseased portions of nail adherent to it.

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* Medico-Chirurgical Transactions, vol. v., p. 135.

† Leçons Orales, tom. iii., p. 65.

‡ Dublin Journal of Medical Science. First Series, vol. iii., p. 240.

There was considerable hæmorrhage, in consequence of the great vascularity of the tissues divided; the boy was perfectly unconscious of the operation, and in the short space of three weeks, there was a perfect cicatrix in the site of an ulcer which for six months previously had embittered his existence.

There has been no return whatever of any irritation on the site of the wound.

Case II. — Patrick Higgins, aged thirteen years, admitted into No. 28 Ward in the body of the South Dublin Union Workhouse, on the 24th of October, 1853.

The disease, in this instance, was situated upon the index finger of the left hand; like the other case, it had originated in a contusion, and presented the same general characters. As we were determined to give the mercurial plan in this case a prolonged trial, fumigations were assiduously used, night and morning, for a lengthened period. Red precipitate, the lotio flava and nigra were all in turn complete failures. The powdered nitrate of silver had no better success, and the iodide of potassium in bark, administered internally, at the suggestion of an experienced medical friend, led equally to disappointment. At length the operation mentioned above was performed, and with the same satisfactory results.

Case III.—Patrick Farrell, aged 40 years, a shoemaker by trade, was admitted into the hospital of the South Dublin Union, in September last, labouring under onychia maligna of the right thumb. He received no hurt in the thumb to his recollection, but, from the nature of his trade, at which he was constantly employed, until he became disabled by his present ailment, he may probably have bruised the part inadvertently.

The complaint, he says, commenced at the root of the nail, which presently separated from the integument, leaving an exquisitely sensitive ulcerated surface behind it. In process of time the ulcer extended greatly in all its dimensions, and when first seen by me it had assumed all the features which characterize the complaint in its inveterate form. There were the great swelling and enlargement of the bulbous extremity of the thumb, the exquisite pain, the fungoid ulceration, the patchy, horney growths of diseased nail, &c.

Local applications were tried without material benefit, and on the 4th of November instant, it was agreed, in consultation with Mr. Colles, and my colleague, Doctor Mayne, to try the effects of local anæsthesia, whilst at the same time, the operation which had succeeded so well in the other cases was being performed.

Pounded ice and common salt were mixed in equal proportions, a little water being added to promote solution; the mixture was introduced into a narrow vessel, and an intense cold was thus rapidly produced. The thumb, immersed in this mixture, quickly cooled down; the sensation produced by the prolonged application of cold was not disagreeable. In about ten minutes, as ascertained by the watch, the part was perfectly white, and wrinkled; firm pressure appeared neither to elicit pain, nor to change the hue of the part, which was thus nearly frozen. In this condition the operation was performed; the part cut like a dead finger; the incisions were nearly if not absolutely unperceived by the patient. Not a drop of blood flowed at the time, and the part was immediately enveloped in rags wrung out of cold water, so as to ensure a gradual and moderate reaction. By degrees the blood again made its way into the vessels of the thumb, proclaiming its presence by a bright red colour, and by a copious oozing of arterial blood from innumerable pores. The hæmorrhage was so profuse, that the wound was opened, but no vessel of sufficient magnitude to warrant the application of a ligature presented itself. We contented ourselves, therefore, with the application of some matico in leaf; and this powerful styptic soon staunched the blood. This man never had an unpleasant symptom; there was little, if any pain, even accompanying the re-establishment of the circulation in the wounded part, and the cicatrix is now all but completed.

In the present state of our experience of this new anæsthetic agent, it is impossible to predict the extent to which it may hereafter be found serviceable; whether it shall be limited to parts of small dimensions, such as a finger, or a tumour, for example, or whether large parts shall be suitable for its application, as yet remains undetermined. Some of the rules, however, under which its employment ought to be conducted, appear sufficiently obvious.

There must necessarily be a limit to the length of time during which it would be safe to submit a part to the chilling influence of a freezing mixture lest mortification should ensue, and care should, of course, be taken to prevent sudden reaction (as in frost-bitten parts) from bringing about the same unfortunate result. To guard against the former misfortune, the operation ought to commence as soon as the cadaverous white colour of the part, and its ascertained insensibility, show that anæsthesia is complete; and to obviate the latter, the part should be made to heat gradually, as in the case detailed above.

## EXTRACTS FROM FOREIGN JOURNALS.

### *Value of the Microscope in the Diagnosis of Cancer.*

We extract from the *Gazette des Hôpitaux* the following observations elicited by the interesting discussion which has lately taken place before the Academy of Sciences on this subject:—

"Is it possible, without the aid of the microscope, to make an exact diagnosis between different kinds of tumours? What real merit is due to the microscope in the diagnosis of cancer? Certainly it is possible in a great many instances to arrive at a just diagnosis, without the employment of the microscope. Often the characters of such tumours are so marked, that it is impossible for the surgeon to mistake them. Thus, as M. Velpeau says, there are appearances which cannot be mistaken; but there are, also, some cases in which the appearances are so little pronounced that it becomes impossible to decide to what class the tumour belongs. These latter form the class which have been and ought to be the subjects of microscopic study: it is, however, on the first class, those which present unmistakeable and well-determined characteristics, that the patient and laborious microscopist must make the observations which are to serve as the foundation for future anatomico-pathological research.

"What, then, are the microscopic characters assigned to cancer? We do not mean to enter into the details of the microscopic anatomy of cancer; we content ourselves by giving the principal results arrived at.

"There is found a cell or globule, enclosing within it a lesser cell, and one or more kernels in which nucleoli are found; but the form of the so-called cancer-globule is far from being always the same: it is round, oval, spherical, often irregular, and presenting prolongations which have been designated horns or caudæ, themselves containing many kernels. Sometimes even the cancer-globule is wanting, and there exist only the kernels and their nucleoli, constituting nucleolar cancer. Such are the characters assigned to scirrhus and encephaloid tumours. But are these the only varieties of cancer? No; there are other tumours which have the sad privilege of returning after removal, either in their former locality or in the economy; such tumours are known as fibro-plastic, cancroid, and epithelial tumours. These are not true cancers, for elements of another nature are discovered in them. In the fibro-plastic tumour are fusiform globules, elongated at their extremities, and terminating in fibres. In epithelial tumours are found cells which resemble those of the epidermis or the epithelial scales of mucous membranes: besides these there are other tumours, enchonchomatous, &c., which, although sometimes having a tendency to return, do not contain the elements which we have just described.

"The chief objection urged against the microscope is, that in cancer there are found cells varying extremely as to form, and which do not always present identical characters. We think, however, that the microscope has done signal service in rendering the anatomical description of tumours more exact, and thus indicating their places in the nosological scale.

"Another more serious objection made against the microscopic examination of tumours of the epithelial and fibro-plastic variety is, that these are composed of elements which are to be found in the economy under divers circumstances. Thus in the indurated chancre, and in tissues indurated by inflammation, the fibro-plastic elements are discoverable, yet these affections run a special course and do not return. In warts, syphilitic vegetations, &c., epithelial cells are met with. The microscope finds it impossible to distinguish between those fibro-plastic and epithelial elements which are capable of infecting the system, and those that are not.

"We believe that, instead of limiting the description of *cancerous tumours* to those characterised by one particular form of cell, we should admit several varieties of cancer, as encephaloid, scirrhous, fibro-plastic, epithelial, and melanotic; all having the common property of reproduction, though not in equal degrees.

"It is possible that the microscope may yet discover among these different tumours which we have just mentioned some anatomical element common to all, and which will give to the group a specific character; but it is certain that the so-called cancer-globule does not exist in a number of tumours which have been with justice designated *cancer*.

"We cannot at present accept all that the microscope has announced, but we must say that this instrument has already rendered great service, and we cannot doubt that it will render still more.

"M. Velpeau, in addressing the Academy, stated, that the cancer cell did not seem to him to be the specific element of cancer; nor does M. Mandl think so: the cell is rather a manifestation of the cancerous condition. Moreover, adds M. Velpeau, the cancer-cell is wanting in some cases of cancer. Of this he quoted cases. The cancer-cell may be confounded with a normal cell. He quoted an example in which the epithelial scales of the vesical mucous membrane were mistaken for cancer-cells. He also quoted cases in which extirpated tumours were examined under the microscope; the cancer-cell was not discovered, the disease returned, and the cell was found in the second growth. We are happy to find M. Velpeau agree with what we have already said, that there are in cancer other anatomical elements than what have been up to this day observed; what microscopists say is very good and very true, but there is something more. M. Velpeau said that certain tumours have clinical characters so marked that mistake is impossible.

"In forty-nine patients operated on, and in whom the diagnosis was made before the operation, forty-nine times the microscope confirmed this diagnosis. There are, nevertheless, often doubtful cases, but in these microscopic observation does not always give sure results.

"M. ROBERT, in a very elaborate discourse, gave more importance to the advantages derived from microscopic examination in doubtful tumours. He thinks that there are a great number of tumours which cannot be distinguished at the bedside so readily as M. Velpeau would have us suppose, and adds, that in cases of this doubtful nature the microscope can render great assistance. Thus in a tumour of this nature, lately presented to the Academy by M. Velpeau, three microscopists, MM. Robin, Verneuil, and Houel, found exactly the same elements, viz., no cancer-cells, but an amorphous matter interposed between hypertrophied mammary granulations. All three were unanimous in indicating these characters. The nature of the tumour was therefore no longer dubious, as M. Velpeau said; it was benign. Who would venture, in such a case, to doubt the utility of the microscope? Although M. Robert admitted his own incompetence in microscopic examinations, he nevertheless warmly advocates these doctrines.

"M. LEBLAND spoke after M. Robert, and also came forward as a defender of the microscope. He read a number of cases, in which he showed that some tumours which, on examination at the bedside, seemed quite benign, yet returned after removal. Microscopic examination had shown him that these tumours were of a cancerous nature. He concluded by a reference to the insufficiency of clinical characters on which to base a sure diagnosis, and he thinks that those derivable from the microscope, added to these, would conduce to a much more certain diagnosis.

"M. LARREY commenced his discourse by running over the benefits which the microscope has already conferred on the natural sciences. He passed in review the improvements made by this instrument in botany, mineralogy, chemistry, &c.; he dwelt on the discoveries made by it in normal anatomy. In all these branches of science the advantages of the microscope are incontestable and uncontested. Why should it not be the same in pathological anatomy? According to this eminent surgeon, the microscope has rendered to this branch of medical science services almost as great as to any other.

"M. MALGAIGNE, brilliant as he always is, went at once to the question, *how far is the microscope useful in the diagnosis of cancer?* Casting a retrospective glance at the works executed since the beginning of this century, he passed in review the theories of Boyer, Scarpa, Laennec, Dupuytren, Abernethy, Astley Cooper, Berard; he showed how their ideas were incomplete on the subject of cancer, and he then passed on to the year 1843, the period when M. Lebert, for the first time, pointed out the characteristic cell of cancerous tumours: from this moment all the old notions were overturned. In 1839 M. Velpeau had already noticed in divers tumours certain alterations not having the clinical characters. Of these tumours one kind, he said, were benign, another malignant. He described fibrous tumours, a great step for that time; but the microscope would soon have left M. Velpeau behind, if he on his side, encouraging microscopic research, had not followed the impulse given by this instrument. But M. Velpeau was soon found to abandon the too absolute dogmas which microscopists wished to impose. M. Malgaigne described in a graphic manner the various *reculades* that microscopists have been obliged to make. Why was their system not generally adopted? They generalized too quickly, and, expressing too dogmatic an opinion, they fell into error: they are unwilling to make concessions, although facts have proved the inexactitude of their theory.

"In spite of the errors into which microscopists have fallen, it is nevertheless true that they have done immense service. The microscope has cleared away the confusion which formerly existed in the diagnosis of tumours; it has enabled us to classify benign and malignant tumours; it has enabled us to recognize the partial hypertrophy of the breast, so little known before. Formerly one had had difficulty in forming an accurate diagnosis even on the *post mortem* table; at present the diagnosis may be made with very great certainty, even at the patient's bedside; it is, therefore, a very important step which the instrument has made in pathology. But the microscope has not yet fulfilled its task; there are, for instance, some fibro-plastic tumours which are benign, others which are malignant. Will not the microscope yet enable us to distinguish between them? According to M. Malgaigne, the microscope is completely useless in practice, but indispensable for scientific diagnosis. He conceives that is impossible to establish the diagnosis of a tumour, even with marked clinical characteristics, without the aid of microscopic examination; and in spite of the disagreement which may exist among microscopists who examine the same tumour, he believes that this means of diagnosis is the most faithful that we have; and, in order to render it as sure as possible, it is necessary to give to the anatomist charged with the examination every information, and above all, the whole tumour, since the cancer-cell may exist in one part of it and not in another.

"Has M. Malgaigne done much to advance

this discussion? We conceive not; for if, on the one side, he has spoken highly of the microscope, on the other he has made little of it, since he refuses to it all practical utility."

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## BIBLIOGRAPHY.

### *Abstract of a Report communicated to the Society of Medicine of Paris, June,* 1854, *on M. Devergie's "Practical Treatise on Diseases of the Skin."* By M. Bourguignon.

[*Continued from page* 298.]

Gentlemen,—I proceed with the report which you have commissioned me to make to you, on the Practical Treatise on Diseases of the Skin, by our esteemed *confrère,* M. Devergie.

You know that, in order to make it the subject of a special analysis, I have reserved the article *Itch,* in which the author seeks to prove the spontaneous generation of the acarus scabiei, which we look upon as the cause, and not as the effect, of this disease. M. Devergie has devoted fifty pages of his book to this subject.

In fact, gentlemen, we have here to deal not only with a medical doctrine, but with an important question, which has occupied, and very justly, philosophers of the greatest merit. If M. Devergie has proved the *spontaneous generation* of the acarus, he has rendered to the exact sciences one of those services to which one cannot call the public attention too much, because, what may be true with regard to the acarus will be true also with regard to entozoa in general; and the Academy of Sciences, which has for some years put questions relating to the occult generation of the entozoa, will certainly receive favourably a demonstration so long expected. You are not ignorant that this question of *spontaneous generation* has occupied the attention and the labour of naturalists of the highest order, that Redi, Vallisnieri, Spallanzani, Bonnet, Lamarck, Cuvier, Schwann, have not been able to find the solution of it, and that among modern physiologists, to speak of only some of them—Rudolphi, Siebold, Dugés, Dujardin, Van Beneden, and Kuechenmeister, have spent many years in the study of this difficult problem without having been able to give an explanation of it. M. Devergie, in his clinical lectures, and in articles in the journals, never fails to profess annually, in opposition to our views, the *spontaneous generation* of the acarus. I have hitherto refused to enter on the discussion of this subject, because I could not take the reasons given in support of it in the articles in journals as a complete explanation of so important a doctrine. I waited for the publication of this treatise on diseases of the skin, where the author leaves us nowhere in ignorance of the facts which have led him to his conclusions. I can now, therefore, though not without hesitation, venture on this much disputed subject, which would demand much more extensive knowledge than I possess.

I am anxious that this discussion should be without anything personal; I shall forget for a moment that I am dealing with the book of a learned and estimable *confrère,* already known by other important works, and who always was to me a kind master. If I did not esteem his works most highly, I should leave them unanswered. He will see, then, I hope, in the more or less severe appreciation of his opinions, a proof of the value that they have in my eyes, and he will, I trust, excuse every apparently aggressive expression that the logic of argument may impose on my pen, for the purpose of making what I believe to be the truth more evident.

The article, *Itch,* is by M. Devergie divided into two parts: in the first, the *spontaneous generation* of the acarus is treated of in a general way, in some degree dogmatical. In the second, the question is of the *itch* as a disease; these two parts certainly make a complete whole; but we shall occupy ourselves exclusively with the first, which contains all the elements of the discussion, all the arguments of any value for the support of the medical doctrine in debate.

In order not to incur reproach, I feel it necessary, notwithstanding their length, to quote almost literally the passages in which the author thinks he has proved the *spontaneous generation* of the acarus; having made these quotations, I shall estimate the value of them, then I shall treat of parasitical generation in general, in order to justify the judgment I have formed on the doctrine of our *confrère.*

"The identification of the acarus," says M. Devergie, "with the disease in which we meet with it, is, we must remember, merely a pure inference of the mind; and as there is no theory in medicine which does not bear more or less directly on therapeutics, this one leads us naturally to the mode of cure of the itch by a purely local treatment.

"The treatment employed at the Hospital of St. Louis destroys the acarus; but is the death of the acarus a complete cure?

"As for me, instead of recognizing in the itch only the effect of the presence of an insect, I am led to believe that it consists, in the first instance, in an eruption which is accompanied by a particular product, *the acarus,* this being itself the agent of infection. Is this insect the effect or the cause of the eruption? In my opinion the eruption of vesicles, of papulæ, or of pustules, which constitute the itch, may be developed merely under the influence of dirt, of misery, or of excess, and in this case the insect would be only the product.

"I say, at first, that the great fact, and that which surpasses all the others in importance in the development of the itch, is not the presence of the insect, but the eruption, whatever may be its form. Another proof of the same is found in the daily-observed fact that, in pustular itch, the acari are almost in an obverse ratio to the number and size of the pustules; whereas if the acarus is the cause of the pustular eruption, explain why the effect is more intense in proportion as the cause is weaker. Besides, it results even from the most positive observations of M. Bourguignon himself, that where the acarus had been inoculated on a perfectly healthy skin, a general and lively itching, and even different eruptions, take place; M. Bourguignon asks if the acarus may not be the bearer of a poison; I confess that such an hypothesis is not without foundation. I have added, as a consequence of the seecondary importance that I attribute to the presence of the acarus in the itch, that this disease can arise spontaneously.

"If the acarus has been spontaneously developed once, why may it not show itself a second, a third, a hundredth time? On this point M. Bourguignon, faithful to the laudable reserve which leads him to advance only what he has himself observed, does not pronounce an opinion.

"M. Bourguignon tells us that the insect, which is the sole cause of the itch, is constantly buried under the epidermis, and that if it comes forth from its retreat it is only in the evening, when it is forced to it by the natural instinct for the union of the sexes; 'since,' adds M. Bourguignon, 'having often been entire days in contact with those affected with the itch, I have never contracted the disease;' and as for the instances of itch, contracted by shaking hands, he doubts their truth, recognizing only the prolonged contact of a healthy with a diseased individual during the night, as a circumstance proper to contagion. Now the cases of itch, contracted without any contact with persons so affected, during the night, are very far from rare; with respect to this, M. Bidard, *interne* of M. Hardy, has presented in a memoir a summary of the treatment of itch during the seven first months of the year 1852, of which the following statistics are the result, on the presumed origin of the itch, among the individuals treated in the hospital. General total, 541—433 men, 93 women; contracted by sleeping with companions, 249 cases; at balls, 4; in the workshops, from the tools, 3; by taking care of a person with itch, 1; by lying on rags, 1; by wearing clothes bought at the Temple, 1; by rubbing dogs, 1. (There is probably a misprint in the figures, because 433 and 93 make 526, and not 541; the mistake is still greater in the other figures of detail.) We admit, then," adds M. Devergie, "as a formal proposition, that if it is true that the itch may be an accidental disease, and, in the generality of cases, developed by contagion or transmission, this disease may also arise spontaneously. In fact, every contagious disease must at one time have arisen spontaneously either among men or among animals, because it must have had an origin. Nothing proves to us that itch can have been transmitted from animals to men, as the cowpock for example.

"M. Bourguignon has demonstrated that the acarus is of a different form in each animal, and that it is impossible to produce itch with the insects of one animal on an animal of a different species. Before the discovery of the acarus, was not the itch considered as a spontaneous disease, produced by want of cleanliness, or by some other cause? Now that the existence of the acarus is demonstrated, we no longer think of anything but this insect, and attribute the entire disease to it. One is led to it by this apparently logical reasoning: since we cure the itch by the destruction of the acarus—since we can only cure the itch on condition of destroying the acarus, the acarus must then be the cause of the disease. But may we not answer: 1st, the acarus is the morbid product of the itch as the micoderm is the morbid product of tinea favosa, as the insect of acne punctata is the morbid product of that disease, and as the pediculus is the morbid product of pedicular prurigo? The favus is infectious by the micoderm, not only from child to child but from the head of a child to the bark of certain trees; nevertheless, do not these diseases sometimes arise spontaneously? Are the means that we employ to destroy the acarus not adopted also to cure the pustules of itch? Let us, then, establish, as sound and just reasoning, that the presence of an insect in the pustule of itch, no more than the cure of itch by the destruction of this insect, proves absolutely nothing against the spontaneous development of this disease; nor do they prove that the insect is the necessary cause of the itch, although it may develope it, or transmit it from one individual to another.

"To test this fact, let us look to what happens during the inoculation and incubation of this disease:—M. Gruby, well known by his beautiful microscopical works, offered himself to me one day to receive the acarus; we placed three of them on the wrist of the left hand, which was covered with little watch-glasses capable of covering them, and held in their places by means of bandages conveniently arranged; the limb was kept in a state of rest, no observable phenomenon manifested itself, although the bandage was kept on for eight days. I know that this fact is, from its nature, purely negative, but it proves, at least, that it is less easy than is generally supposed to inoculate scabies by means of the acarus; for it was a learned physician who wished to increase his knowledge who submitted to this experiment; the acari went out of the places which contained them; we took care to examine if they could move perfectly; finally, they were placed on the wrist, that is to say, on the part where the itch is first developed. Thus all the conditions most favourable to inoculation had been fulfilled. I am far from denying the possibility of inoculation by the acarus; I admit it; but I say that it is not so easy as it has been considered.

"It is true, according to M. Roger, and other modern observers, that the vesicles and pustules of itch are merely accidental products of the acarus.

But, what cannot be denied, and what they do not speak of, are the following facts, which the physician may observe with the naked eye, viz., a pimple with a furrow leading from its margin, and at the most distant extremity of this furrow an acarus can be caught with the point of a pin, provided the extremity of the furrow is carefully opened. From which one is rationally led to suppose, that the vesicle which presents the line directly united with the furrow would, in the first instance, contain the acarus.

If one supposes that the acarus produces the pimple, as it digs the furrow, then the idea at present so absolutely professed is destroyed, namely, that the eruption of the itch, whatever may be its form, is only an accident, a complication assuming the lichenoid, eczematous, or pustular form, according to different circumstances.

Is there anything fixed in the epoch of the development of scabies after infection? there is nothing positive in this respect. In one case three days' incubation, in another five, seven, twelve, sixteen, twenty days, and even six weeks, according to different authors; we must, then, admit, that in the case of certain individuals the acarus walks about on the surface of the body before penetrating under the epidermis. According to M. Bourguignon, there is a period of incubation, and a period of existence; every acarus that passes from one individual to another shuts itself up immediately under the epidermis; it traces a furrow there. It can only lay eggs from the sixth to the tenth day; the eggs require from eight to twelve days to be developed and to become insects.

"The patient must have the infection from six to ten days when he presents a furrow; in thirty days he has many of them.

"Now patients come most frequently to physicians to ask their advice, when the acari are at the third generation, which requires from forty to fifty days of incubation. In opposition to these ideas we say that it results from the facts observed in 1852, in the service of M. Hardy, and of all the preceding observers, that the average term of the appearance of the acarus is from eight to ten days after the contagious contact.

"Thus it took place exceptionally in three women the second or third day; in a tailor the fourth day; and a medical student, who had extracted eight or ten acari from an individual, extricated, on the next morning, an acarus from the furrow (*sillon*) where it was concealed on his own wrist.

"Shall we say with M. Bourguignon that the acarus has a preference for the skin of the bodies of children, and a repugnance to that of the bodies of adults? Does not this fact agree with those diseases which are developed by an internal cause, as occurs in all eruptive contagious diseases.

"Let us follow and examine the natural effects of the itch. There are three distinct forms of eruption in this disease. In the first kind of itch we observe a pimple, three-quarters of which are formed by a papula, and the top of which presents a very small vesicle. In this species, called *canine itch*, and which might be designated by the name of *papular itch*, the itching is excessive, and the acari are very numerous. In the second species there are, on the contrary, for the most part, large pustules presenting very little redness at their base, and secreting a very abundant yellow matter,—this is the *pustular itch*. In the third, which may be justly named *vesicular*, the redness of the pimples is almost nothing; a vesicle filled with a serous liquid rises on the surface of the skin, there it acquires a certain volume, the whole without any inflammatory appearance.

"These are the three distinct species of itch established by Bateman, the differences of which we shall endeavour to show in our clinical lectures, because their existence cannot be denied.

"There is one very grave objection to be made to the partisans of the opinion that the acarus constitutes the itch; it is this circumstance, which has been known from time immemorial, that scabies disappears without any treatment under the influence of a general disease, and reappears when this disease recovers, that is to say, that all the phenomena of it disappear, pimples, furrows, and insects, but that on convalescence these three phenomena reappear. Thus, during the month or six weeks that typhoid fever lasts, the person affected with itch will have no perceptible symptoms of the disease, but as soon as he is convalescent pimples, furrows, and insects again appear, and with the same intensity.

"M. Bourguignon replies that the acarus is asleep; it contents itself with living, barely living indeed, because its fertility receives a sensible check, but it continues to live." After these general considerations come four cases; one by M. Leveillé, two collected in the service of M. Devergie, and a fourth, for which we are indebted to M. Boeck of Christiana, the object of all of which is to prove the spontaneous origin of the acarus, or of the itch, by the disappearance of this disease on the occasion of the supervention of another disease, and then its spontaneous reappearance.

After detailing at full length these four interesting cases, M. Devergie observes:—

"Let us then conclude, from the discussion into which we have thus entered :—

"1st. That the itch may be a disease sometimes arising spontaneously.

"2nd. That if the acarus constantly coincides with the itch, its existence may very well be admitted as a morbid product, and also as the agent of transmission."—*Révue Médicale, August,* 1854.

(*To be continued.*)

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## SUMMARY.

*Acute Hysteria in the Male.* By M. BROKE GALWAY, Surgeon Royal Artillery.—F. H., aged 22, a gunner and driver in the Royal Artillery, admitted into hospital at this station under my care, August 14 of the present year, complaining of looseness of bowels, pains in the limbs, malaise, &c. These symptoms subsided, and he was free from complaint for the following three days, at the expiration of which time he experienced severe uneasiness in the stomach and pain in the head (forehead and occiput). Did not entirely lose these sensations, though they were benefited by treatment; and, at half-past eight, P. M., on the third evening after their commencement, he had a "fit," preceded by pricking and shooting in the thighs and knees. I did not see him in the fit, but it was represented to me as consisting in a staring of the countenance and rolling of the eyes, but of which he himself retained no recollection. In twenty minutes he was again sensible to surrounding objects; but, on coming to himself he complained of "great agony" in his belly, head, and breast, as also of uneasiness in the throat; he described the latter as the seat of a "shooting, pinching pain," alternating with "heaviness in the part. In the course of the same night he had a recurrence of the fits. I saw him in the second, and, indeed, in several others. Without other warning than a rolling of the eyes, he passed rapidly into a state of insensibility, accompanied with such violent struggling as to require the assistance of several men; his teeth were clenched strongly, but he did not foam at the mouth. Some of these attacks were longer than others, and were always succeeded by a state of insensibility. Between their recurrence he complained of the same distressing pain in the abdomen and head. He derived great relief from hot stupes to the abdomen, and the head felt more comfortable under vinegar and water. His general state I treated with opiates and antispasmodics. The pupils throughout were lively and unaffected. The fits continued to return, but with longer intervals; and, on coming to himself, after one of these, the power of utterance had entirely disappeared.

Three days had transpired since he left his bed. He was allowed to walk about, and divert himself with the other men. He appeared, and described himself to me as "well;" "was never better in his life." In the course of the last of these, he suddenly exclaimed, "I can speak!" and did so immediately, as freely and strongly as ever. For above five minutes antecedent to the return of his voice, he experienced a sensation as of "cramp in the throat," accompanied with "difficulty of breathing." Discharged to his duty, August 28.

September 8th.—Had been on leave from his barracks during the day; was sober when he came back, at "tattoo," but admitted that he had drank three pints of porter, for which he was not the worse. Was awakened, at ten P. M. on that night, by a sensation of "pinching and shooting in the knees and thighs," from thence extending to the abdomen, and gradually from last-named point to chest and throat, and finally to head, exactly in the order which I have named. The attack soon amounted to "choking in the throat;" was attended with the same universal implication of the muscular system as before. insensibility was complete; and, on awaking to consciousness again, his voice had disappeared as before. The duration of the fit was about an hour. On recovering his senses, he declared, and, by his symptoms, evinced, the utmost distress in the belly and chest, as also in the head, to each and all of which he constantly pointed with his hand as the sources of his sufferings.

The second attack was a close repetition of the first. The fits were as severe, the aphonia as complete; a similar time involved from the rise to the fall of the complaint. The voice was as completely in abeyance as before, and its return introduced by a similar sensation in the throat to that described under recovery at first. But there was a feature peculiar to and distinguishing the second attack, which was not a little characteristic of its essence, and which remarkably pointed to the predominance of nervousness in the play of the morbid processes. It was this,—that not a point of his body, from the crown of the head to the sole of his foot, but had become a centre of morbid sensibility. Whithersoever the finger was laid, there, as though the galvanic wire had alighted, an involuntary shrinking occurred—a quick, spasmodic wincing of the part, indicative of positive pain from the touch.

The subject of these remarks was well nourished, and of florid complexion. He represents himself as irascible in disposition, and easily excited. He is wont to shed tears and to laugh under insufficient causes; also, when excited, it is not uncommon with him to be inconvenienced by the sensation of a "ball in his throat." During each of his late attacks he passed an inordinate quantity of water; while, in health, he eliminates very little.—*Med. Times and Gazette.*

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## MEATH HOSPITAL.

### *Observations on the Diagnosis of Aneurism of the Abdominal Aorta.*

BY DR. LEES,

PHYSICIAN TO THE HOSPITAL.

Although the diagnosis of aneurism of the abdominal aorta is established on as certain principles as those of most other internal diseases, yet cases do occasionally occur which are attended with great obscurity, so as to render not only the diagnosis, but even the differential diagnosis very difficult.

My colleague, Dr. Stokes, in his recent valuable work on the "Diseases of the Heart and Aorta," has enumerated the following list of diseases for which aneurism of the abdominal aorta has been mistaken:—1. Rheumatism, affecting the lumbar muscles, diaphragm, and spine; 2. Diseases of the kidney, with or without calculus; 3. The presence of worms; 4. Flatulent colic; 5. Intestinal neuralgia, analogous to painter's colic; 6. Psoas abscess; 7. Caries of the spine; 8. Disease of the liver; 9. Malignant tumours of the abdomen. To this long list I will venture to add two more, which have come under my own observation, and in which I have seen medical men of high standing and great experience deceived; in one case, mistaking it for sciatica; and in another, for periostitis of the femur. As the latter case occurred in my own practice, I will detail it in full, as it presents some points of interest.

*Reported by* Mr. James Murray.

James Gordon, a house-painter, æt. 43, was admitted to the Meath Hospital complaining of violent pain in the left hip, shooting down the front of the thigh, the lower third of which bone was very tender on pressure, though there was not any redness, swelling, nor external appearance of disease. He lay on the left side with the thigh and leg flexed; the least motion caused great pain, he could not extend the limb himself; but it was easily extended, when his attention was diverted. He stated, that he always enjoyed good health till three months ago, when, after exposure to cold on board a steam boat, he was attacked with severe pain in the lumbar region, for which he was cupped with relief, when the pain went into the hip, and has remained there ever since. There was no febrile disturbance. On the second day after admission, a swelling appeared in the iliac region of left side, very tender on pressure, but without any pulsation. Next day, however, the swelling extended over the crest of the ilium round to the spine, attended with a well marked diastolic pulsation, particularly evident between the crest of the ilium and the false ribs of the left side; no murmur could be detected at the part where the pulsation was strongest; but a hoarse murmur could be heard posteriorly opposite the lumbar vertebræ, and also in the abdominal aorta above the umbilicus. The left leg and foot now became œdematous, which rapidly extended to the thigh, and he died suddenly about a week after admission, suffering severe pain to the last. On opening the abdomen the viscera appeared healthy, but the peritoneum covering the lumbar and iliac region of the left side was pushed upwards and forwards by a large mass of dark, coagulated blood, the substance of the left iliac and psoas muscle being infiltrated with blood. A large aneurismal sac was found immediately below the cœliac axis, which had burst behind the peritoneum, and having become diffused, dissected its way beneath the iliac fascia; there was no erosion of the vertebræ.

I consider this case to be very important, as it presented much difficulty in the diagnosis. At first neither I, nor any of my medical friends who examined the case with me, suspected aneurism, as the man made no complaint of pain in the back, or of any uneasiness in the abdomen, but solely directed our attention to the violent pain in his thigh, which was so tender that he could scarcely bear the least pressure on it, leading us to consider it as periostitis of that bone. The occurrence of swelling in the iliac region on the next day led us to supect the formation of an iliac abscess, but the rapid increase of the swelling, its course, and diastolic pulsation, combined with a murmur heard posteriorly, and also in the epigastric region, then satisfied us that all his symptoms depended on an aneurism of the abdominal aorta, and the result of the *post mortem* proved the correctness of our opinion. The diastolic pulsation in the tumour which formed in the lumbar region was very evident, and is worth recording, as Dr. Walsh has stated that these secondary tumours do not pulsate; but in this statement he is certainly wrong, as the fact of their pulsation has been long since established by cases reported from the Meath Hospital, which occurred in the practice of my predecessor, the late Dr. Graves, and Dr. Stokes, one of the earliest and best recorded cases having been published in the "London Medical Gazette" of June, 1831, by Mr. Hamilton, then a pupil of the Meath Hospital, now Surgeon of the Richmond Hospital; and Dr. Stokes writes in his recent work, "I have found that the lumbar tumours, and in one case a tumour which formed at the groin, had a feeble and diffused, but still an evident, diastolic pulsation, attended with a soft and equable murmur."—p. 627.

In this case, the absence of pain in the back, of any tumour or even pulsation in the abdomen, was sufficient to account for our not making a correct diagnosis in the first instance; but we will occasionally meet with cases in which, even though some of the most significant symptoms of aneurism are present, yet still the differential diagnosis is exceedingly difficult, as in the following case, which occurred recently in the Meath Hospital:—

*Reported by* Mr. Charles James Egan.

John M'Donagh, æt. 43, a car-driver, of very intemperate habits, and greatly emaciated, came under my care in the Meath Hospital, August, 1854, complaining of inability to swallow solid food. He referred the obstruction to behind the upper bone of the sternum, and also complained of severe and constant pain in the loins, shooting round the sides, there was constant pain in the epigastrium, and an indistinct fulness was detected above, and to the left of the umbilicus, where a pulsation could also be felt and seen, and a hoarse murmur heard while in the recumbent posture, but this murmur disappeared when he assumed the erect position, though the impulse then became much stronger; the veins were not distended over the abdomen, nor in the lower extremities; there was no ascites. The urine was high-coloured, depositing a lateritious sediment, which, examined under the microscope, presented amorphous lithate of ammonia, with minute crystals of lithic acid aggregated together. He stated that his illness commenced ten weeks ago, with acidity of the stomach and vomiting of his food soon after breakfast; this was soon followed by dysphagia, and then pain in his back, relieved by pressing it against any substance, or by lying on his face; he felt a constant pulsation in the epigastrium. The pulse at the wrist was synchronous with that of the femoral arteries; no morbid sound over the heart. He continued in hospital for about six weeks, and became gradually more emaciated; he then went home, but was attended there by Mr. Egan, who saw him two days before his death, and made the following note of his case:—

His face almost presents the appearance of a skeleton; his eyes are deeply sunk in the orbits, and he cannot distinguish any object (the eyes appear as if the fluids in them had been absorbed); the cheeks are hollow, skin dry and yellow, breath very fœtid; no pulsation can be felt at the wrist, or in the abdomen, the sounds of the heart are almost inaudible. He complained of no pain during the last three or four days; his tongue is dry and furred; bowels have not been moved for a fortnight, he takes no nourishment except a little wine. He sunk gradually, and died a few days after this, but we could not obtain an examination of his body.

This case illustrates the occasional difficulty in the differential diagnosis between aneurism of the abdominal aorta and other tumours in the abdomen. This patient was at first admitted under the care of Dr. Stokes, whose accuracy and skill in diagnosis are so well known, and yet, after repeated and careful examinations, he, with great candour, and the modesty of a true master of his art, declared that he could not arrive at any positive diagnosis at that period of the case. The appearance of the patient, his history, and the character of the pulsation, were more that of cancer of the cardiac orifice of the stomach; but the constant and severe pain in the back, combined with the presence of a murmur heard only when in the recumbent posture (which has been satisfactorily established by Dr. Corrigan to be a very important element of diagnosis in many cases of suspected aneurism), the absence of distention of the abdominal veins, and of ascites, were all in favour of its being an aneurism. I thought that the state of the urine might help to throw some light on the subject, but I could not find the condition of that secretion alluded to in any recorded cases of aneurism of the abdominal aorta that I have consulted. In the second volume of "Simon's Chemistry," though an analysis of the urine in almost every disease is given, yet he does not allude to that of aneurism. The result of my examination of the urine in this case was certainly in favour of its being cancer of the stomach, and the subsequent progress confirms me in this opinion, though I speak with diffidence from not having had a *post mortem* examination. I think, however, that the condition of the urine in cases of aneurism is a point well worthy of study, as it may tend to assist us in doubtful cases, and I think it at present untrodden ground, as I am not aware of any previous case in which the urine has been examined with reference to diagnosis between aneurism and other internal diseases. As an additional proof of the great difficulty in some cases of making the differential diagnosis between aneurism and cancer, Dr. Stokes, in his recent work, has recorded, p. 634, a case somewhat similar to this, of a man æt. 53, who was under his care in the Meath Hospital last year, with a large, irregular, lobulated tumour, apparently solid, occupying the centre of the abdomen. He vomited his food soon after taking it, was much emaciated, and complained of severe pain in his back, a group of symptoms very similar to those of my case. For several days Dr. Stokes inclined to the opinion of a cancerous or solid tumour of some kind, when it was discovered that the bellows murmur at the epigastrium could be traced upwards, becoming more and more intense towards the arch of the aorta: this, along with the fact of the tumour presenting two kinds of murmurs—one soft and diffused in the upper portion of the tumour, the other sharp and muscular in the lower part—made him doubt that the case was cancer, but he would not declare it was aneurism. The man died suddenly a short time afterwards, when a vast aneurism was found, which had burst into the mesentery, thus forming the large tumour felt during life.

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## RICHMOND SURGICAL HOSPITAL.

### *Case of Strangulated Abdominal Hernia, with a few Clinical Remarks.*

BY JOHN HAMILTON,

SURGEON TO THE HOSPITAL.

Mary Lawlor, æt. 33, a rather corpulent woman, was brought to the Richmond Hospital on Wednesday, November 5th, labouring under symptoms of strangulated hernia. She had passed nothing from her bowels for two days before admission, and had been vomiting constantly during that time. There was a tumour about the size of an infant's head, just above and to the right of the umbilicus, it was of rather a doughy feel, and received a distinct impulse on coughing; pulse was weak and small; skin moist; tongue brown and rather dry. She complained of great pain in the abdomen. She had been a hard drinker, and had always had "a bad stomach." She was, however, pretty well till two days before admission, when she thought the tumour on the abdomen (which had existed for eight years) became larger, and shortly afterwards vomiting set in, and she had no motion from her bowels up to her admission. Attempts were made by Mr. Lloyd, the resident pupil, to return the hernia, which, after some trouble, slipped into the abdomen with a gurgle, and the ring could be felt through the integument, and three fingers passed into it without difficulty. The reduction of the hernia did not relieve the symptoms; the vomiting still continued, as well as the pain in the pit of the stomach, and an enema procured no motion. Mr. Lloyd sent for me. I found the woman labouring apparently under the symptoms of strangulated hernia, and greatly sunk. On examining the hernia the intestine had again protruded, but was readily returned with a gurgle, and the lower edge of the large ring could be distinctly felt, but not the upper edge, where, on the contrary, could be discerned a soft mass, like omentum; there was no soreness of this part, nor of the abdomen, nor any tympany. In the right hypochondrium, the liver could be felt considerably enlarged. The question now arose, what was the cause of the continuance of the symptoms? Clearly not strangulation, the intestine being easily returned, and there being no soreness of the hernia or pain in it, or any abdominal tenderness. Could the vomiting depend on the diseased state of the liver? The matter thrown off was in large quantity, and like yellowish curdly whey. A grain of calomel was given every hour, saline draughts occasionally, and a blister to the abdomen.

This treatment had no effect on the vomiting, which continued up to her death on Monday, but the bowels acted freely on Friday. She was delirious two days previous to dissolution. A careful consideration led me to believe, that a temporary strangulation of the intestine had excited the vomiting, which was kept up after the return of the bowel by the disease of the liver. I was led to this opinion by a case which I had seen a short time previously in consultation with Dr. Kirkpatrick. A man about fifty, emaciated and sallow, was admitted with supposed strangulated femoral hernia of four days' standing, the vomiting having dated from that period, and no motion from the bowels. The rupture was represented by a small tumour in the left cribriform space, not tender, and which appeared unlike an intestinal hernia, wanting the tense, elastic feel, more like an enlarged lymphatic with deep connexions. Under any circumstances, the man was evidently in no state for operation, being in a dying condition. On a *post mortem* examination, the small tumour which had represented a femoral hernia was found to be simply an enlarged lymphatic gland. The intestines, though contracted, otherwise appeared natural and healthy, but the liver was in a very morbid condition, small, hard, and tuberculated. Let us now see what explanation the autopsy of Mary Lawlor affords of the continuance of those symptoms so closely resembling strangulated hernia; where there was a hernia, really strangulated for a time, but where the relief of the strangulation by the return of the bowel gave no check to the vomiting, and where an inconsiderate surgeon, misled by the persistence of the vomiting and constipation, might have hastened to operate.

The body was examined twenty-four hours after death. The hernial tumour was flaccid, the abdominal parietes were loaded with fat, as also the mesentery. The sac contained a foot and a half of the colon and some omentum. This portion of omentum was large, and very much thickened with deposit of firm fat, and from its size was irreducible, as well as from firm and numerous bands of old adhesion at the upper part of the ring, the lower part of which was quite sharp and clear; the ring would admit several fingers. The portion of colon in the sac was readily reducible, and differed by only a slightly deeper tinge of colour from the rest of the bowels. The inside of the sac uninflamed, and there were no signs of peritonitis. Water passed freely through the intestines. The pyloric orifice of the stomach was contracted, apparently spasmodically, and the mucous membrane of a deep pink colour, but there was no morbid deposition in the coats. A large chronic ulcer, the size of a crown piece, existed at the upper and back part, near the lesser curvature of the stomach, very deep, having destroyed all the coats, the base of it being formed by firm, fibrinous deposit; the edges clean cut as with a knife. The surface and adjacent part of stomach quite pale. The liver was twice its usual size from simple hypertrophy, being natural in colour and consistence.

It is quite clear that the diseased state of the stomach is sufficient explanation of the symptoms, the vicious action of vomiting, once induced by the temporary strangulation of the bowel, being kept up by the ulcer of the stomach, just as by the disease of the liver, as in Dr. Kirkpatrick's case.

It is very satisfactory that the operative proceedings were rejected in both. To show the difficulties of this subject, I may mention a case I saw when a student. The gardener of a gentleman in the neighbourhood of Dublin was brought into an hospital with the usual symptoms of strangulated hernia, constant vomiting and gulphing up of everything swallowed, obstinate constipation, a pain in the belly, with a tight feeling from the umbilicus to the back. He was not aware of having a rupture, and when examined nothing was discovered in the usual seats of hernia, but an enlarged tender gland in the right cribriform space. He was sent up to the medical wards as a case of peritonitis—and died.

The *post mortem* examination showed that the case was really one of strangulated hernia, the sac excessively small,* being imbedded in the centre of the enlarged lymphatic gland, and containing a portion of small intestine the size of the top of the forefinger, of a deep plum colour, from strangulation. The most intense inflammation existed in the peritoneum and intestines, which were glued together by lymph. Though the diagnosis of strangulated hernia is generally simple enough, yet instances like these should make us weigh well the circumstances of each particular case.

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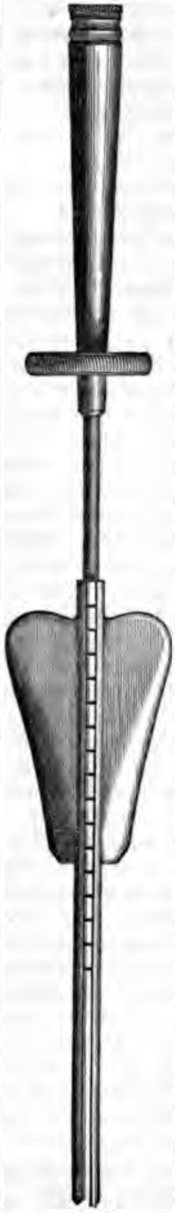
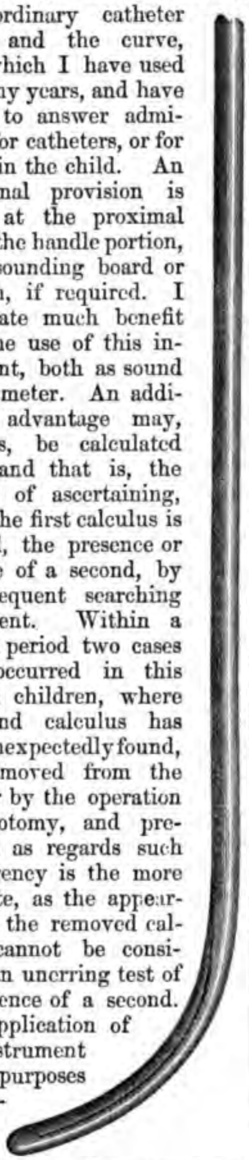
## *Additional Remarks on Lithotomy, Calculus Meter and Sound for the Child.*

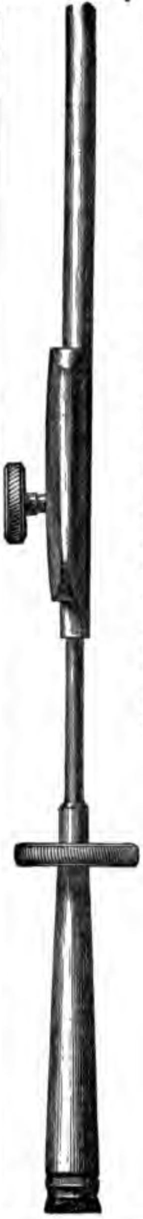
BY CHRISTOPHER FLEMING, M.D., M.R.I.A.,

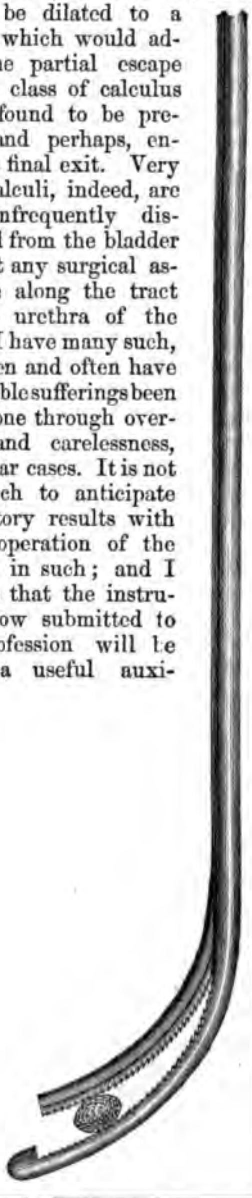
SURGEON TO THE HOSPITAL.

At page 181 of the present volume of the GAZETTE I alluded to the advantages to be derived from a capability of estimating the size of a calculus in the bladder of the child previous to the performance of the operation of lithotomy; and I mentioned that Mr. O'Neill, of the firm of Thompson and O'Neill of Henry-street, in this city, Cutlers, promised to construct a suitable instrument under my directions—on the principle of Mr. L'Estrange's. The success of this undertaking appears to me to be in all respects most satisfactory, and its execution most creditable to this establishment—the finish and working of the instrument being most perfect. It is manipulated with the greatest freedom. It passes along the urethra with ease, and answers well the objects of sound and meter. The annexed woodcuts, executed by Mr. Oldham with his usual faithful accuracy, cannot fail to explain the details of this instrument. I call it "a calculus meter and sound for the child." The front view of the handle portion exhibits a scale, the lines on which mark the distance of separation of the blades at the distal end of the instrument, whilst the lateral view of the same shows a milled-headed screw, whereby the grasped calculus is secured and fixed until the measurement is taken. By joining the respective portions of the instrument in the drawings, its exact length and curve are ascertained. The length is thirteen inches, the size between five and six on the ordinary catheter scale; and the curve, that which I have used for many years, and have found to answer admirably for catheters, or for sound in the child. An additional provision is made, at the proximal end of the handle portion, for a sounding board or tundish, if required. I anticipate much benefit from the use of this instrument, both as sound and as meter. An additional advantage may, perhaps, be calculated upon, and that is, the facility of ascertaining, when the first calculus is secured, the presence or absence of a second, by a subsequent searching movement. Within a limited period two cases have occurred in this city in children, where a second calculus has been unexpectedly found, and removed from the bladder by the operation of lithotomy, and precaution as regards such contingency is the more requisite, as the appearance of the removed calculus cannot be considered an unerring test of the absence of a second. The application of the instrument to the purposes of lithotrity would, in my opinion, be hazardous, the very dense nature of calculi in the vast majority of instances in childhood demanding a more solid apparatus. The practical benefits, however, derivable even from the limited application of this instrument to the measurement of calculi in the child, are unmistakeable. Moreover it is obvious, that in a case where the stone was ascertained to be small, even smaller than that delineated in one of the drawings, it might, when grasped, be located to a greater or less distance in the urethra, or held firmly fixed there, when a comparatively simple operation would effect its excision. Nay more, apart from such procedure, the urethra, even in the child, might be dilated to a calibre which would admit the partial escape of such class of calculus when found to be present, and perhaps, ensure its final exit. Very large calculi, indeed, are not unfrequently discharged from the bladder without any surgical assistance along the tract of the urethra of the child. I have many such, and often and often have intolerable sufferings been undergone through oversight and carelessness, in similar cases. It is not too much to anticipate satisfactory results with the co-operation of the surgeon in such; and I do hope that the instrument now submitted to the profession will be found a useful auxiliary.









## WHITWORTH AND HARDWICKE HOSPITALS.

### *Clinical Report of a Case of Acute Purpura Hæmorrhagica.*

BY DR. M'DOWEL,

PHYSICIAN TO THE HOSPITAL.

The following case, which was recently under observation, is, I think, deserving of being recorded, since it furnishes an example of purpura hæmorrhagica occurring in an *acute* form, and accompanied by new and unusual symptoms :—

*Reported by* Mr. Bury, *Clinical Clerk.*

Case.—Mary Murphy, æt. 20, a brush maker, admitted into the Whitworth Hospital Oct. 25, 1854.

*Previous History.*—Patient stated that she had always enjoyed very good health until her present illness, which commenced ten days previously with shivering and pains in her limbs, and other febrile symptoms. In many situations there was excessive itching of the surface. [The same symptom, it is well known, often precedes the appearance of jaundice.]

On the third day after the appearance of these *premonitory symptoms* a purple coloured eruption appeared on the calves of the legs, and immediately the sensation of itching in these situations disappeared; but the pains continued. The spots continued to come out during the day, and by night had spread over the lower extremities, and reached to the trunk. During the next three or four days the discoloration of the skin extended rapidly, seeming to recede rather during the day, and to reappear much more vividly at night. The day before admission her tongue became swollen. During this period she continued to feel chilly and unwell, but had no headache; the evening before admission she vomited some greenish-coloured matter. The catamenia should have appeared about this period, but were absent.

*State on Admission.*—It was difficult by any description to give an adequate idea of the patient's condition at this time. The surface of the body was everywhere covered with raised, livid, ecchymosed patches; these, for the most part, were of very large size, like bruises inflicted by severe injury, the smaller spots of extravasation were placed on distinct white bases, and elevated considerably above the level of the surrounding skin. These were of a brighter colour than the larger patches, in which a dark purple or violet hue prevailed.*

The subcutaneous areolar tissue was universally the seat of effusion, giving rise to general anasarca, of that firm, elastic form which does not pit upon pressure. The face was greatly swollen, the eyelids tumid and ecchymosed. On opening the lids (which was done with some difficulty) the conjunctiva was found to be of a dark red colour, owing to blood effused beneath it; the lips were much swollen, the gums, for one-half their depth, were of a deep blue colour, but healthy in structure. The submaxillary regions, and the entire neck in a less degree, were bloated looking and swollen. The tongue, much enlarged, was firm to the touch, and tender, as in glossitis. Both speech and deglutition were in consequence very seriously impaired. The urine was acid, not albuminous, with a specific gravity of 1040.

[In forming an opinion as to the nature of this case, we had only to decide whether it was one of scurvy or of purpura; an important distinction, because, although closely allied on account of their blood origin, and resembling each other in the similarity of their local manifestations, these diseases are not, as a general rule, curable by the same mode of treatment.

Effusion into the areolar tissue, so prominent a symptom in the case under consideration, belongs to scurvy rather than to purpura; but on the other hand, scurvy is found to occur only in the region of the larger joints, and is accompanied by a peculiar indurated condition of the soft parts, and by more or less of pain on motion or on pressure. These conditions were absent; but two circumstances especially distinguished this case from scurvy: firstly, the condition of the gums; these were firm and healthy; in their dental half they were of a peculiar deep blue colour, as already mentioned, but they were free from sponginess and from fungous growths. Secondly, the absence of the only efficient existing cause of scurvy, viz., a deficiency of fresh vegetable food. On inquiry, we found that the diet of this girl "included a fair share of vegetables; she ate potatoes daily, and cabbage or some other vegetable, once or twice a week, in addition; besides she had latterly eaten much fruit, especially apples." The case, therefore, we concluded was not one of scurvy, but of purpura, in an acute and an inflammatory form.]

*Treatment and further Progress* (abridged Reports.)—As the swelling of the tongue was the most urgent symptom, ten leeches were directed to be applied to the swollen submaxillary regions. A draught of castor oil and turpentine was prescribed; and after the bowels had been freely acted on, half drachm doses of turpentine in the following form :—

R. Ole iterebinthinæ,
Mucilag. gum. arabici, āā ℥ss.
Mist. amygdalarum, ℥vii.
℥i. 4tis horis.

26th.—Slept badly last night, was restless and uneasy; face much more swelled; lips so much swollen that the gums cannot be brought into view; the patient's whole appearance is most unsightly, so much so that screens were put up between her and the other patients.

Deglutition is much more difficult. Fresh ecchymoses have appeared since yesterday. Pulse 120, small and not full. Bowels freed; motions of a *greenish* slimy appearance, [query blood ?] Leeches to be repeated.

Same treatment to be continued.

27th.—Had a better night; swelling of face and of tongue is much diminished; patient can articulate better, and can swallow with much more ease. On both occasions the leeches extracted an unusually large quantity of blood, and the leech bites continued to bleed for many hours.

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* These appearances are very faithfully delineated by Mr. Connolly in a drawing now in the collection of the Richmond Hospital.

28th.—Œdema rapidly subsiding; tongue of nearly natural size; the first spots are of much smaller size, but, as before, are placed on elevated white bases, and have a firm, unyielding feel; alvine discharges are still greenish; pulse 108, and of larger volume.

Leeches to be repeated. Turpentine mixture as before.

29th.—Steadily improving; ecchymoses are everywhere fading, and in many parts are of a yellowish colour; pulse 96.

Continued to improve Nov. 1st and 2nd.

Nov. 3rd.—All anasarca and œdema gone; gums of natural colour; conjunctivæ have recovered their white colour; tongue is clean and of natural size; pulse natural; yellowish marks alone indicate the seat of the former ecchymoses; no fresh exudation has occurred for several days; bowels confined.

Pil. calomel. c. coloc.
Omit turpentine mixture.

4th.—Ordered mist. sulph. quininæ.

6th.—Scarcely a trace of the disease remains; soon afterwards discharged.

On the 16th November the patient visited the hospital; she was in perfect health, and every trace of purpura had left the skin. The duration of the disease was about twenty-one days.

*Remarks.*—With purpura hæmorrhagica, or a cachectic malady, accompanied by depressed vital power, and diminished crasis of the blood, all practitioners are familiar. The examples we meet with of the disease are usually, therefore, furnished from localities where bad ventilation and overcrowding prevail. Occasionally, no doubt, the disease occurs in persons who are in easy circumstances, who have lived well, and in healthy localities; but in such we are accustomed to find the evidences of delicacy of constitution either hereditary or acquired. The case above detailed presents a type of disease wholly different from that of ordinary purpura, as will appear when we advert to those peculiarities in its history which are most deserving of notice. With reference to *mode of access*, it will be observed that the hæmorrhagic effusions were preceded and accompanied by febrile disturbance of the system generally. In its ordinary form purpura hæmorrhagica is essentially "purpura sine febre."

*Nature of the Effusion.*—Whilst in ordinary cases purpura is characterized by passive cutaneous hæmorrhage in the form of petechiæ or ecchymosed patches, we have here a copious effusion poured out rapidly as if from overloaded capillaries; in a word, active effusion as contrasted with passive, and an anasarcous condition of the entire body, similar to that attending acute or febrile dropsy.

The *pathological condition of the blood* was likewise peculiar. In this case there was manifestly an *excess of fibrin* in the blood; to this is due the elasticity of the anasarcous parts, and the white elevated and indurated bases on which the purpuric spots were elevated. In ordinary purpura the blood is essentially in a *defibrinated* condition.

In connexion with this excessive fibrinous exudation we may notice the remarkable *enlargement of the tongue*, depending, no doubt, on exudation into its substance, which for two or three days was a source of much danger and suffering to the patient.

The absence of all mucous hæmorrhages is likewise remarkable. Purpura hæmorrhagica usually proves fatal, either by the frequent recurrence of hæmorrhages from mucous surfaces, which gradually exhaust the vital powers, or more suddenly by sanguineous effusion into some vital organ, as the brain. Here, on the contrary, effusion took place from the subcutaneous capillaries almost exclusively; passive hæmorrhage was wanting, and the only apparent danger to life was from the sudden and excessive engorgement of the tongue.

Dr. Graves has described* a form of purpura, under the name of *exanthema hæmorrhagicum*, in which febrile symptoms preceded the eruption, but in other respects, his cases, two in number, do not resemble that of Murphy, for in them the rash on the surface was trifling in extent and brief in duration, whilst the hæmorrhage from the mucous surfaces was so excessive as to cause death, although the antiphlogistic treatment was strictly enforced. In the case of Murphy, on the contrary, the amount of subcutaneous exudation was excessive, whilst hæmorrhage from the mucous membranes was wholly wanting.

Systematic writers also describe a form of purpura under the name of *purpura febrilis*, in which more or less fever accompanies the change in the skin; but with this exception, there is no resemblance between this affection and that which I feel conscious of having very imperfectly described in the preceding pages.

As to treatment, there is little to be added: *depletion* was fully employed, and with marked benefit, whilst turpentine in half drachm doses fully maintained the reputation which has long attached to its use in this disease. This valuable remedy was, I believe, first employed in the treatment of purpura by Dr. Copland as far back as the year 1817.

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* Clinical Medicine, p. 877, ed. 1843.

## Case of Strangulated Femoral Hernia, terminating in Artificial Anus; Recovery.

BY JOHN W. WILLIAMS, A.M., M.B., T.C.D., F.R.C.S.I.

MEDICAL ATTENDANT, KILLUCAN DISPENSARY.

Bridget C—, æt. 26, married, but has never had any family, always enjoyed good health, states that about three weeks ago, when returning from chapel, she was suddenly attacked with violent and excruciating pain in the lower part of the abdomen, the severity of which prevented her from walking home for a considerable period, and compelled her to lie down on the side of the road; at length the pain abated, and she was enabled with some difficulty to reach her dwelling about two miles distant. Shortly after returning home the pain again seized her, accompanied with vomiting, which continued at intervals during the entire night. Next morning she took a dose of castor oil, which operated on her bowels in about four hours afterwards, when the vomiting ceased entirely, and never returned again. She now discovered a small tumour in the left groin; this was hard and painful, especially so on pressure, and was a source of continual annoyance, occasioned by darting pains shooting down her thigh, and upwards and outwards towards the crest of the ileum. The pain was not, however, so severe as to prevent her from pursuing her usual avocations, viz., feeding fowl, and preparing and going with her husband's meals to where he was working, a distance of about a quarter of a mile from her residence.

On Tuesday last, June 13th, the tumour increased in size, became more painful, and red on the surface; she now applied a poultice to it; but kept walking about the house as usual.

Wednesday, 14th.—The tumour was now so painful that she could not walk about, but sat at the fire all day; it also increased very much in size (about as large as a hen's egg), and became much harder than it was previously; towards evening she felt and heard the swelling give a loud "crack," as if something had burst or given way; the report was so loud that she asked some persons who were sitting with her at the time if they did not hear it. The pain now abated; but the tumour increased suddenly in size, and became softer, as if it contained fluid.

15th.—The swelling was much enlarged, more painful, of a livid hue, and appeared much softer in the centre. She continued poulticing it, and on the next morning (Friday, 16th), it burst externally, giving exit to a quantity of watery matter, pus, fæces, and several worms (ascarides). In the afternoon of this day I first saw her. On interrogating her I ascertained that she had had a small femoral hernia for several years, which gave her no annoyance until the present attack, and for which she never sought medical advice. On examination I found a small aperture in the left groin, in the situation corresponding to the femoral ring; it was of an oval shape, the long axis transversely, its edges rugged, and surrounded with a red, inflamed, hard circle, tender on pressure, and especially so at the upper and outer part; pressure over or above Poupart's ligament gave no pain; but flatus, fæces, and fluid freely escaped, thus establishing clearly the existence of a communication with the intestinal canal. The patient told me she was much alarmed at seeing the worms come from the orifice, and also that a great portion of some broth she had taken for her dinner escaped in a short time afterwards, when she stood up to dress herself. I ordered her to preserve the horizontal posture, to keep a small poultice of bread and water to the sore, and to take ʒss. of Ol. Ricini immediately, and a terebinthinate enema in the evening.

Saturday, 17th.—The medicines above ordered brought away a great quantity of ascarides *per rectum* and a few from the artificial anus in groin; the pain and tenderness much abated. I omitted the poultice, and dressed the sore with lapis calimin. ointment.

18th.—Very little fæces came from groin today, but a good deal of fluid escaped; the orifice is smaller, and no pain felt on pressure, except at the upper and outer part, in the direction corresponding to the falciform process of the fascia lata.

21st.—Complained much of burning pain last night. This morning six worms came away from the wound, which gave her much relief. No fæces or fluid, but much flatus escaped. Ordered—

Ol. ricini ℥ss.
Spt. terebinth. ℥ ss.
Vit. ovi. unius Misce. Ft. haustus, H. S. sumend.

22nd.—Medicine brought away a great deal of ascarides *per rectum*; no pain in groin; pressure above Poupart's ligament failed to express any fæces or fluid. Ordered a compress and bandage to be applied to the wound.

24th.—No pain in groin since; orifice much contracted; one worm came away this morning.

Rep. haustus, vespere, et enema terebinth. mane.

27th.—Wound nearly healed, except in upper part, where a fungus appears, to which I applied nit. argent. and repeated compress and bandage.

July 4th.—No discharge of any kind from wound since; there is a drop of healthy pus exuding from the orifice, which is almost healed.

14th.—Cicatrization complete; allowed to get up and resume her ordinary duties and regimen.

August 8th.—I saw this patient to-day; she has continued perfectly well ever since, and walked a distance of two miles to my residence; a hard cicatrix exists in the situation of the former hernia; there is no pain felt on pressure, and a complete consolidation of the structures forming the femoral ring has taken place.

The above case presents an example of what may be termed chronic strangulated hernia. The length of time which elapsed from the accession of the first symptoms of incarceration, until the bowel gave way into the hernial sac, and finally burst externally, forms a peculiarly interesting feature in the history of this case. The absence of constitutional disturbance, and the (comparatively speaking) slight inconvenience experienced by the patient during this period, also deserve notice, as being of practical importance. From the nature of the discharges, and the large quantity of ascarides, which, from time to time, escaped by the artificial anus in the groin, it would appear that either the lower portion of the colon, or its sigmoid flexure, constituted in this instance the contents of the rupture. The subsidence of the acute symptoms, from the use of purgative medicine, would point out not only the importance of endeavouring to free the bowels as soon as possible in every case of strangulated hernia, as is fully insisted on by systematic writers on this subject, but also the impropriety of resorting to operation before giving the fullest trial to other remedial means.

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## PATHOLOGICAL SOCIETY MEETINGS.

*November 25th*, 1854.

DR. FLEMING, IN THE CHAIR.

The first meeting of the season took place in the Anatomical Theatre, Trinity College. Robert Adams, M.D., was elected President for the ensuing year. The subject for the Prize Essays for the Society's Gold Medal for 1855, was announced to be "*The Injuries, Diseases, and Malformation of the Spine.*" Essays, with fictitious signatures, to be sent in on or before the 15th of April next.

### *Transposition of the Viscera.*

DR. MAYNE, said he wished to exhibit a case of nearly complete transposition of all the unsymmetrical organs in the chest and the abdomen, which had fallen under his observation within the last week. A drawing of the thoracic and abdominal viscera *in situ* by Mr. Connolly, and an injected preparation of the heart and the primary branches of the aorta, together with the trachea and œsophagus, were laid upon the table.

The apex of the heart is directed downwards, forwards, and towards the *right*, pointing to the costal cartilage of the fifth rib; the two hearts are respectively transposed, the right or pulmonary being situated at the *left*, and the left or systemic being placed to the right.

At the base of the heart, the order of the great vessels is reversed, being from left to right, as follows, viz.: superior vena cava most to the left, aorta in the middle, and pulmonary artery most to the right.

The arch of the aorta, immediately after its origin, inclines upwards, forwards, and to the *left*, its transverse portion inclines from left to right, and it then winds round the *right* bronchus to gain the mediastinum. Its three primary branches from left to right are, the arteria innominata, right carotid, and right subclavian; and the right recurrent nerve winds round the arch of the aorta, whilst the left winds round the left subclavian artery.

The right branch of the pulmonary artery is the shorter of the two, and gives off the ductus arteriosus; the left bronchus is the shorter of the two; it is also more horizontal, and larger than the right, and has the vena azygos winding round it to join the superior cava.

The thoracic aorta lies to the right side of the bodies of the vertebra, and the vena azygos to the left; the œsophagus in the neck projects to the right side of the trachea, and the left lung consists of three lobes, whilst the right contains but two.

In the abdomen the liver occupies the left hypochondrium, and the great bulging extremity of the stomach and the spleen occupy the right.

The duodenum is curved, so that its convexity is directed to the left, and its vertical portion lies to the left side of the spine.

The ascending colon lies in the left lumbar region, the descending colon in the right; whilst the cœcum, with its vermiform appendix, occupies the left iliac fossa, and the sigmoid flexure of the colon the right.

The right kidney is placed rather higher in the abdomen than the left, the abdominal aorta lies to the right of the spine, and the inferior cava to its left. The right renal artery is shorter than the left, and the left emulgent vein is shorter than the right. These various anomalies are interesting both to the physician and to the surgeon, as they are calculated to mislead the one in diagnosis, and the other in operations.

A stethoscopist ignorant of the possible occurrence of such a case, and finding the heart beating to the right of the sternum, might attribute this phenomenon to some of the diseases which are known to produce dexiocardia, instead of to the true cause, congenital malformation.

In such a case as this, again, the rules laid down with such minuteness for the differential diagnosis of valvular murmurs at the right and left sides of the heart respectively (if of any value at all) must be reversed, as must also be those supposed to denote valvular murmurs in the aorta and the pulmonary artery respectively. Thus we would be obliged, in such a case, to seek for a mitral murmur at the right nipple instead of at the left, and for an aortic murmur (at its maximum of intensity) at the second costal cartilage of the left side, instead of at the second costal cartilage of the right.

In exploring the lungs, too, a certain amount of percussion dulness, not attributable to thoracic disease, would be encountered at the base of the left lung, whilst the usual hepatic dulness would be wanting at the base of the right lung. Should an hepatic abscess make its way into the chest, this lesion, which is always obscure, might readily enough be overlooked or mistaken.

In the abdomen, again, where a correct diagnosis so frequently depends upon a manual examination of the regions supposed to contain the diseased viscera, how completely at fault would the practitioner be, who was unprepared to meet with these transpositions!

Were a surgeon to attempt the operation of œsophagotomy, by cutting on the left side of the trachea, he would be at fault; and were he to attempt to tie the arteria innominata by cutting down in the neighbourhood of the right sterno-clavicular articulation, he would also be at fault; he would "go to the right and go wrong." In the abdomen he might be sorely puzzled by finding Dupuytren's cæcal abscess in the left iliac fossa instead of in the right, and in selecting the point of the large intestine for the performance of Amussat's operation for artificial anus, he might find himself unexpectedly, either greatly above or greatly below the point of election, according to circumstances.

It would be difficult to enumerate, in a communication necessarily limited, all the practical bearings of this case; but, perhaps, enough has been said to show their extreme importance.

Of the cause of this curious malformation, Dr. Mayne stated, that he was unable to offer any satisfactory solution. His attention had been directed, through the kindness of Doctor Robert Mac Donnell, to an interesting paper by Allen Thompson, in the July number of the "Glasgow Medical Journal," on this subject.

Doctor Thompson seems to think, that the deviations from the ordinary positions occupied by the various viscera, are connected with an abnormal position of the embryo during the earlier phases of its evolution; but granting that this may be so, we cannot admit the explanation to be satisfactory, until the embryologists assign a satisfactory reason for this malposition of the embryo, an achievement which, as yet, they do not appear to have accomplished.

Many of those present may possibly be anxious to learn, how the various functions were performed in the individual whose case has thus been brought so prominently before them.

The body was that of a man, æt. 60 years, and notwithstanding that so many of his organs were out of their proper places, he had never known what it was to suffer from one day's ill health during his entire life. Latterly his mental powers had somewhat failed, and for this infirmity he had been admitted into the South Dublin Union Workhouse, but so free from serious illness had he always been, that he had never entered the hospital, nor had any physical examination of his chest or abdomen been ever instituted.

This man retired to bed in his usual health the evening before his death, and the next morning he was found dead, his death having occurred so instantaneously, that those who slept in the same dormitory were not aware of the fatal occurrence.

From the previously disturbed condition of his mind, it was conjectured by Dr. Mayne that his death had been the result of apoplexy, and on *post mortem* examination this conjecture was fully verified, an enormous coagulation of blood having been found at the base of the brain occupying the circle of Willis and lacerating and compressing the mesocephalon.

Knowing how often apoplectic seizures are associated with diseased heart, Dr. Mayne proceeded to inspect this viscus, and finding its apex directed to the right side, he therein obtained a clue to the transpositions of the several viscera, the examination of which he was afterwards enabled to follow up at his leisure.

### *Bright's Disease of the Kidney—two Forms of—essentially distinct in their Pathology and Progress.*

Dr. Corrigan observed—I beg to submit to the Society this specimen of diseased kidney, and to make some observations upon it.

The kidney presented is considerably larger than natural, greatly deepened in its cortical tissue, rather soft and brittle in its texture, with very little vascularity, and with what vascularity there is, in star-like radii; externally its surface is pale yellow, smooth, and homogeneous, and its capsule readily stripping off. The corresponding kidney exhibited similar appearances. The kidney in these appearances presents merely the appearances that are familiar to us all as one form of Bright's kidney, sometimes called fatty kidney, but which may now I believe be recognized as a form of diseased kidney in which the increase of size depends upon the combined depositions of fat and a substance that we know no more of than that it appears to be some morbid alteration of albumen or fibrine. It contrasts very strongly with that form of diseased kidney also designated as Bright's, in which the kidney is greatly reduced in size, scabrous on its surface, with its capsule adherent; the texture of the kidney itself, showing white slender fibres or threads, and with its cortical substance oftentimes only a few lines in thickness. To this form of kidney I ventured, long since, to give the name of cirrhosis of kidney, from the analogy which existed between its appearance, and I believe its mode of production, and the contractile disease of the liver to which that name is given.

My object in exhibiting this specimen is to support a view which I brought forward before the

Society in the first years of its formation, 1840, 1841, viz., that the two pathological states of the kidney, which I have just contrasted, are not, as generally taught, merely different stages of the one disease, but that they are really distinct diseases, having no necessary connexion with one another, or in other words, that the large yellow kidney is not the first stage of cirrhosis or the contractile kidney, but is a disease that may run through its whole progress without any tendency to terminate in cirrhosis, just as the large, smooth, yellow, or fatty liver is a distinct disease from cirrhosis of that organ.

The present case will bear out this view in support of what I have already on former occasions submitted in several similar instances to the Society. The case was that of a man, æt. 42, admitted into the Whitworth Hospital, September 19, 1854. He was in a very anæmic condition, with body and limbs anasarcous and with ascites. He was drowsy, difficult to be roused, and sinking from an exhausting diarrhœa, with a raw, red, and fissured tongue. The urine was 1·007, loaded with albumen. His case was hopeless on admission, as he had ulceration of the bowels. He died on November 17, preserving his senses to the last. The history which he gave of his illness was, that about six months previously to admission into hospital, he felt dull pain across the loins, accompanied with frequency of micturition, that the urine diminished in quantity, and became of a deep red colour, and that soon after his ankles and legs began to swell. In this instance, as in others brought forward, the disease ran its whole progress without any tendency to cirrhosis. If cirrhosis were, as generally taught, the second stage of the enlarged kidney, we should naturally expect that in all cases of any considerable duration, we should find the kidney in the state of cirrhosis; but it is not so. If we then establish this point, we arrive at a conclusion that I think is important, not only to pathology, but, what is of far more consequence, to practical medicine, for we then arrive at the knowledge of the fact, that there are two states of kidney confounded together under the name of Bright's disease of the kidney, and presenting distinct characters—one of which, judging from analogy, cirrhosis of the kidney constantly and certainly pressing in upon the glandular function of the organ, must at last certainly prove fatal, by preventing the organ from excreting urine and salts, and probably more than the other forms tending to produce coma or the peculiar form of disease of the brain which supervenes on suppression of the functions of the kidney; while in the other form, the enlarged yellow kidney, there is not the same amount of mechanical obstruction; the kidney enlarges to make room for the interstitial deposition, and judging from analogy as before with the liver, the supervening dropsy is rather the result of irritation, as it is in the case of ascites connected with large yellow liver, than of mechanical obstruction, as in the case of cirrhosis of liver; and just as we again and again succeed in removing dropsy connected with large yellow liver, and the liver may remain in this enlarged state for many years without much impeding the functions of life, so may we expect a similar result in the analogical state of the kidney, while cirrhosis of the kidney and of the liver is equally sure to produce fatal dropsy. It is, therefore, an important point in pathology, and a cheering one in practical medicine, to be able to demonstrate, as I hope we are, that the enlarged yellow kidney has not a certain tendency to run into the necessarily fatal form of cirrhosis. This view may, perhaps, tend to help us in unravelling those cases which are so constantly met with of kidney diseases, or Bright's disease, apparently quite similar in their symptoms and in the presence of albumen in the urine, and which, nevertheless, present so much difference in their progress, some being quite cured, or cured again and again for years, while others as certainly run to a fatal termination. This is not the place to make any observations on diagnosis or treatment; and, therefore, I shall conclude with repeating the position I have at former times advocated, that the large yellow kidney, and contractile or cirrhosed kidney, are not necessarily stages of the one disease, but that they are essentially different pathological states, these differing pathological states bearing directly upon the progress and treatment of renal dropsy.

*Tubercular Disease of the Kidney.*—DR. LAW exhibited a kidney, in a state of tubercular disease. The case will be published more fully.

*Strangulated Abdominal Hernia.*—MR. HAMILTON related the history of this case, and displayed the morbid appearances. It is reported, p. 339.

## EXTRACTS FROM BRITISH JOURNALS.

### *On the Pathology and Treatment of Gout.*

[In a paper by Dr. Begbie, Physician in Ordinary to the Queen in Scotland, published in the "Edinburgh Medical and Surgical Journal" for April last, we find the following summary of his views, and directions for the treatment of this affection]:—

1st.—That gout is a constitutional disorder, originating in mal-assimilation, and in the secretion and non-elimination of a morbid product, which, by accumulation in the blood, and transmission through the ordinary channels of the circulation, disturbs many functions, and engenders many diseases.

2nd.—That it is a hereditary disease, chiefly through the contaminated blood transmitted from parent to offspring; but that it may also descend from ancestor to heir, through a peculiarity of the textures prone to be affected by the morbid material.

3rd.—That it may be acquired by habits of indulgence, calculated to injure and deprave the digestive and assimilative processes, and produce the peculiar contamination of the circulating fluids in which the essence of the disease consists.

4th—That the condition of the system, or diathesis, thus transmitted by hereditary descent, or acquired by mal-assimilation, or by both, is intimately connected with the relations of urea and uric acid, and their compounds in the system, as manifested by the presence in the blood, by the deposition in the parts affected, and by the elimination through the several emunctories, of these materials, during the prevalence of the disorder, or on the occurrence of a fit of gout.

5th.—That there are various stages of this diathesis, of longer or shorter duration, of sthenic or asthenic character, according to age, sex, temperament, habit, and mode of life, and other circumstances.

6th.—That the primary effects of the gouty diathesis are those of a poison, often slow and insidious, disturbing many functions, chiefly those of the digestive organs, and of the nervous centres; but sometimes more speedy, through its rapid accumulation in the system, and engendering active disease in various tissues and organs of the body, the synovial, the mucous, and serous membranes being peculiarly prone to be affected by it; while the heart, the liver, and kidney participate largely in the general disorder.

7th.—That the development of gout in the hand or foot, or as a febrile disorder, or an inflammatory affection of any tissue or organ for which it has an affinity, appears to free the system, for a time, from the symptoms and sufferings of the diathesis, through the elimination of the morbid material by the usual emunctories during the progress, or at the crisis, of the disease.

8th.—That the altered or contaminated condition of the blood in the gouty habit has subsequently an injurious effect, either vitally or mechanically, on the muscular structure of the heart and bloodvessels, by weakening their power, and producing dilatation and attenuation of their cavities and trunks, and leading to venous congestion and obstruction, and to their consequences in hemorrhagies, dropsical effusions, and similar affections.

9th.—That ultimately the heart and bloodvessels, through the continued prevalence of the diathesis, undergo structural changes by the deposition of earthy matter in their coats; and thus gout is intimately allied with palsy, apoplexy, and other cerebral diseases, and with angina, syncope, and rupture and other fatal cardiac affections.

Temperance—strict temperance, in the gratification of every appetite, is demanded of every subject of the gouty diathesis. Exercise systematically pursued in the open air; attention to the healthy state of the skin, and to the different excretions, in short, the strict observance of all the well-known laws for the preservation of health, may, without the assistance of medicine, ward off a coming fit of gout, or check the progress of the gouty diathesis. But the physician is seldom called to offer advice in such circumstances, and it is only when the gouty poison has accumulated in the blood, and disturbed more or less some of the great functions of life, or lighted on some texture, and raised up inflammatory action and febrile disturbance, that his aid is for the first time sought and obtained. Is it a fit of the gout, as described by Sydenham? Let the sufferer rest in bed; let the foot be elevated, and enveloped in a warm-water dressing covered with oiled silk, and let the strict antiphlogistic regimen be carefully enjoined. The functions of the liver and bowels will be found so disordered, that a full dose of a laxative, such as rhubarb, with the bicarbonate of potash, is required; and the action of the kidney will be found so impeded, and the secretion so disordered, that saline diuretics, those especially of the salts of potash, are demanded in full and continued doses. Colchicum, in conjunction with these means, will be found highly useful; without them its operation is uncertain, and its efficacy doubtful. Administered alone, and in large doses, as is too often the case, the remedy may bring a fit of gout rapidly to a close, either by a powerful cathartic or diuretic effect; but the system is not relieved, though the local affection may appear to be subdued. It is by securing the eliminating property of the drug, along with the depurating effect of the saline diuretic, that we obtain the full benefit of colchicum in gout; and this is best accomplished by small doses of the remedy. In acute articular gout, or in any of the inflammatory affections which are allied to it, fifteen or twenty drops of the wine prepared from the seeds, in combination with scruple doses of the acetate or nitrate of potash, or still larger of the bicarbonate, administered three times a day, and continued for a week or longer, will be found an eligible mode of prescription; and when the more urgent symptoms are overcome, the remedy may be continued still longer in the form of the acetous extract in combination with a laxative, a bitter, or a chalybeate once or twice a day, care being taken not to press the drug to the production of its sensible physiological effects. We believe that it is by the known power which colchicum possesses of favouring the elimination of urea from the system, that it acts so beneficially in gout, and that this effect is best produced when it acts silently and slowly, without depressing the nervous system, or exciting, in a marked manner, the secreting organs. In cases of gouty inflammation affecting an organ essential to life, or of a structure so delicate that the slightest lesion proves injurious to its functions, for example, the pericardium, or the iris, it may be necessary to employ bloodletting in some form, and to seek the aid of mercury to prevent the deposition of lymph; but even in those cases colchicum should be steadily employed in the manner we have pointed out, and its beneficial effects will be best secured after these other remedies have told on the system. No time, however, should be lost in seeking its aid, nor should it hastily be abandoned, from disappointment of its promised virtues. The exhibition of colchicum, with such depurants as we have referred to, will be found availing as a means of cure in all the various forms of disease connected with the gouty habit, not only in such inflammatory affections as ophthalmia, otitis, tonsillitis, pleuritis, bronchitis, and the like, but in disorders of the nervous system, as headache, toothach, lumbago, sciatica, &c.; nor will its efficacy be less conspicuous in those cases of rapid effusion into the synovial capsules, and in the gonorrhœa and leucorrhœa dependent on a similar cause. Its power over the affections of the skin connected with the gouty habit is very striking; urticaria, erythema, eczema, and the like, are remarkably subject to its control; indeed, the remark applies more or less to all the disorders which prevail during the earlier stages of the diathesis, and before the heart and bloodvessels, and the liver, kidney, and other viscera, have sustained abiding lesion.

Nor even then is colchicum, prudently and judiciously employed, altogether valueless. The combination of colchicum with some of the preparations of iron will be found useful when the heart is found feeble and dilated. The combination of colchicum with mercury will be useful when the liver is enlarged or torpid; and the same preparation, with the addition of digitalis or squill, will be found to act beneficially when dropsy in any of its forms results from organic lesion of these or other viscera; and throughout the course of the diathesis, whatever remedy may appear requisite to fulfil some indication of treatment will, in general, receive aid from "the great specific."

In the chronic and asthenic forms of gout, while simple nutriment and a moderate use of wine are requisite, no remedy has appeared to us so useful as the combination of colchicum with quinine, beberine, or iron; but the dose of the colchicum ought to be small, generally in the form of extract, and administered at long intervals, and continued over a long period.

In the recent works of Drs. Todd and Gairdner, and in the Notes and Reflections of Sir Henry Holland, will be found many suggestive and practical remarks on this part of the subject, and to them we must refer, having already exhausted our space; we cannot close, however, without referring to the singular benefit which may be derived from cod-liver oil, in some of the morbid conditions of the gouty. In the chronic and asthenic forms, generally, and in the more acute, after the severity of the illness is overcome; in almost all the chronic ailments connected with the gouty habit, and in the cachectic condition of the offspring of gouty parents, we have found it to be possessed of wonderful renovating powers. Nor have we been less agreeably surprised to find how potent, after persistent use, it is, in the least promising of the gouty sequelæ which can be reached by medicine: we mean the nodosities of the fingers and toes, and the crippling, lameness, and deformity occasioned thereby. The consumptive and the rheumatic have profited largely by the remedy which Dr. Bennett, after it had long been laid aside, has had the merit to restore to the list of our therapeutic agents; and its reintroduction into this country, we are not without hope, may yet remove, in some measure, both the truth and the reproach of the classic sentiment:

"Tollere nodosam nescit medicina podagram."—OVID.

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[It is of interest to contrast this painful disease, as it presents itself in the London hospitals, with the foregoing observations. We therefore subjoin some remarks of Dr. Budd, published in the form of a Clinical Lecture in the "Medical Circular."]

When called in, then, in practice you will remember the diagnostic marks laid down as to rheumatism. The history of gout, on the other hand, is the following: It usually comes on in a single joint, about the age of twenty-nine or thirty. Most commonly it makes its unwelcome seizure in the toe; there is swelling and a mahogany redness of the joint, while at night there is a painful, gnawing agony, which prevents sleep. The pain abates during the day, but is worse at night, followed in the morning by feverishness, loss of appetite, and thirst. The patient in gout perspires a good deal. There is a peculiar odour of this exhalation; in fact, you can smell gout; the urine, too, is high coloured, red, and deposits a sediment. The disease, if not mistaken, abates after a little, leaving great weakness; but the general health, it is rather popularly known, and truly so, is very manifestly improved.

If the patient is seized a second time you will find two joints are attacked, not one; but, as a general rule, fewer joints and different ones than those in rheumatism. Gouty patients, it is also worth while remembering, will have the disease at particular seasons. Gout, although the patient may appear better after it, ultimately breaks down the system. When the gouty inflammation subsides, the joint gets better, but not before chalk stones are deposited; these are chiefly composed of lithate of soda. I have seen them on the ears, in the follicles of the skin, as well as in the joints so often referred to. Men will write their names on tables with chalk in their knuckles.

The *diagnosis* of gout is a subject of some interest. How are you to know rheumatic fever from gouty inflammation? on this diagnosis, in fact, the success of your treatment, when called in, will entirely depend. In rheumatic fever then, you must recollect, the local affection is different from what it is in gout; in the latter, the skin is more affected, it presents a deep, dusky, mahogany colour, shining, with the veins much enlarged; desquamation, after a little, comes on, showing that the skin is diseased. In gout there is also more œdema and effusion about the joint; we never or scarcely ever see this in rheumatism; one, in a word, is tense and elastic, one pits on pressure, the other does not; the hand in gout, in fact, is like a boxing-glove more than anything else. This man, who came into hospital, and was first treated for rheumatism, only required to show his knee and ankle to assure me it was gout, not rheumatism. There is less sweating in rheumatic fever than in gout; the fever of the latter is more of a remittent character; that of rheumatism, on the other hand, is of the continued kind. The history of patients will often help to clear up the diagnosis. Gout chiefly attacks men, and seldom women, of the age of 27 or 30; rheumatism is very common at this age. Gout, or rather the disposition favourable to gout, is inherited, while rheumatism does not show any marked peculiarity in this way.

Rheumatism, as we said, has a tendency to all the joints alike; gout has a sort of elective affinity for the big toe, or the fingers; the terminal joints of fingers or toes are the special victims of gouty inflammation, while these are seldom or never attacked with rheumatism. All these are points too often forgotten in every-day practice, but they cannot be too often repeated, or made too common-place.

The *treatment* of gout is very plain. Some of our best authorities make it very short, indeed, and will tell you, "patience and flannel" will do everything; but if gout is thus neglected, lithate of soda settles in the smaller joints, and the *disposition* to gout is encouraged; I would rather advise, when you get the disease in time, with fever, hot skin, full pulse, and gout well marked, give calomel and colocynth first, with the ordinary senna draught, followed up by carefully administered doses of colchicum. You may give the *acetic extract* gr. i. ad ii. omni nocte, or the *vinum sem. colchici*. Of the latter you must not give more than a drachm a-day.

It is most important for you to learn how to give colchicum; it is a very powerful remedy, and accumulates in the system. You should give vin. sem. colchici gtts. xx. ter in die, in the ordinary saline draught; but not with alkaline solutions. The latter may be given in the intervals, but alkalis are said to decompose colchicum; or you may give the colchicum at night, and the bicarbonate of potash in the day. Camphor mixture, cinnamon water, &c., may be given with the colchicum, and small doses of the spts. nitri dulcis; this and the aq. acet. ammoniæ will act on the skin, and liver, and kidneys, and thus assist in eliminating the noxious matter of the blood, which assist, if they do alone assist, in generating this terribly painful disease. We need not give formulæ, as every case will require prescriptions adapted specifically to itself. As a matter of prophylaxis, the physician should advise patients to avoid drinking largely of malt liquors or bad wines; indigestible and unwholesome food also is to be proscribed.

In inflammatory gout you should attend also to the digestive organs, but above everything malt liquors should be given up; I have known two or three patients make marvellous recoveries by this simple expedient alone. The Bath waters, at one time, enjoyed a great reputation for curing gout; now all the world that can do so go to Weisbaden, where many remarkable cures are made; to these waters I would add gentle tonics, preparations of steel, preparations of bark, the liquor cinchonæ without acid. An overdose of colchicum is known by the patient complaining of nausea; if pushed further, he will have vomiting and diarrhœa, and very remarkable depression of pulse to 50 or even to 40. If there be headache the dose is too large. We should not give colchicum where there is already diarrhœa or irritable bowels; when given it should be continued until after the gouty inflammation has disappeared, in small and vanishing doses. The limb affected, I need hardly remark, should be wrapped in hot wool, or hot flannel, or, what I have found useful, fomented with the hot alkaline fomentation.

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## SUMMARY.

*Carbuncle.*—[In an elaborate paper on this subject in the "Medical Times and Gazette," the following conclusions are arrived at]:—

1. The frequency of carbuncle has vastly increased of late years, and still continues to do so.

2. But little is known respecting its predisposing causes.

3. It may affect any age, excepting perhaps the very young.

4. Men are much more liable to it than women.

5. It occurs without distinction, at all periods of the year.

6. It occurs in almost equal proportions among

the temperate and well-fed and the intemperate and ill-fed.

7. It has a premonitory stage in a considerable proportion of instances.

8. Its general treatment should be by purgatives and alteratives in all cases, and by stimulants or salines, according to the character of the constitutional disturbance.

9. Incisions are demanded when a carbuncle is spreading, or attended by much pain,

10. In a great majority of cases, free incisions relieve the pain, and in a considerable degree arrest also the spread of the disease.

11. If the spreading and the pain have already ceased, no benefit will be derived from incisions, but the sloughing and suppuration will be much increased.

12. The "core" which separates consists, for the most part, of dead areolar tissue.

13. No proof exists that carbuncle exerts any eliminative influence on the system.

[We subjoin the chief points dwelt on with reference to treatment]:—

*General Treatment.*—Three or four different plans of treatment are in vogue in the hospitals for the treatment of carbuncle. First, by stimulants, full diet, quinine, ammonia, &c. Second, by opium, freely used, and generally combined with tonics. Third, a more expectant plan, by salines, low diet, &c., in the first stage, and the moderate use of tonics afterwards. In all these, purgatives, of course, form a part. One of the largest carbuncles which we have ever seen occurred to a tailor, from Hampton Court, who was treated by Mr. De Morgan, in the Middlesex Hospital, about two years ago. The case was an extremely severe one, the depression of the vital powers being such that, for more than a fortnight the result seemed very doubtful. The very free use of opium, in combination with liquor cinchonæ appeared to answer an excellent end, and the man ultimately recovered. We have, however, not seen the opiate plan tried on a sufficiently large scale to justify an opinion as to its general merits, the method by stimulants being by far the most frequently adopted. Mr. Lloyd, at St. Bartholomew's, is the surgeon who is perhaps the most sparing of any in the use of stimulating remedies; and we certainly have not observed that his cases do any worse than those of others. In the early stages, Mr. Lloyd generally prescribes salines and fever diet; unless, indeed, the patient be very old or infirm. In one case under his care, after the sloughs were separating, several attempts were made to give stimulants, but on each occasion, a fresh accession of inflammation being caused, they were at length desisted from, and the man recovered very satisfactorily without. In carbuncle, as in all other diseases, the surgeon should doubtless pay less regard to the name and reputed pathology of the affection than to the symptoms actually present. If the system be much depressed, if the disease appear to have resulted from bad living, and, above all, if the patient's instincts demand them, stimulants should be pushed. If there be extreme restlessness, pain, exhaustion, &c., and if, after a few doses, it appears to agree with the stomach, the sustaining properties of opium may probably be very valuable. Should, however, the patient be of fair strength, the disease in its stage of advance, and attended by sharp inflammatory fever, it may be doubted whether any empirical evidence as to the usefulness of stimuli under such circumstances has yet been obtained sufficiently strong to lead the surgeon to ignore the rational principles of treatment. In such a condition, the arrest of the disease would probably be much sooner effected by alteratives, purgatives, and salines, than by brandy or opium. It is even not improbable that the bleeding caused by incisions is often of great advantage.

*Local Treatment.*—From the time of Wiseman, the practice has been general of making free crucial incisions into all carbuncles. It has not, however, been absolutely universal. A few surgeons, among whom may be mentioned John Pearson in our own country, Von Walther in Germany, and Perrez, in France, have been sceptical as to its efficacy. There are also in the present day some surgeons who do not recommend it. Chelius, on the contrary, who appears to have paid some attention to this question, records thus, in strong terms, his conclusion:—"That cutting into the carbuncle is generally neither useful nor necessary, is the most dangerous statement that can be put forth respecting its treatment." Respecting this point, two propositions may, we think, be maintained: first, carbuncles will very frequently get well without having been incised. Secondly, the practice of incision, however free, does not by any means universally arrest the carbuncular inflammation. In proof of the former, the fact, that of the cases in our list, eight were not treated by incisions, is conclusive. In these, for the most part, the patients came under care when the disease was evidently arrested, and when free openings had spontaneously formed; so that there was no object for resort to the knife. Many others besides these have been under our observation, and, as a general rule, it may be asserted that the destruction of tissues is far less extensive when the incision has been avoided, than when practised. The consequent cicatrix is of course much less also.

As to the relief of pain resulting from incisions. Almost without exception a free cut across a carbuncle gives immediate relief; and even when the disease spreads afterwards the pain never again becomes as severe as it was at first. The following, as to immediate and perfect relief, is an example of the ordinary course.

Case.—William B——, aged 67, admitted into St. Mary's Hospital, under the care of Mr. Coulson, on August 9. He had a carbuncle, the size of the palm of a hand, over the sacrum, which had been three weeks forming. The swelling was tense and hard, and the skin round it of dusky red. He had suffered intense pain. Mr. Coulson made a free crucial incision into the swelling, from which a moderate amount of bleeding occurred. The patient was from that moment completely relieved of pain, and his recovery was rapid.

The assertion that incisions, even of the freest kind, do not always arrest carbuncular inflammation, will scarcely be held to need proof by any one who has seen much of the disease. If the proof be required, however, we may refer to the fact, that in five out of the twenty-seven cases in which incisions were practised, their repetition was subsequently necessary. Yet granting the occasional spontaneous curability of carbuncle, and the occasional failure of treatment by incisions, the case still stands very triumphantly in favour of the latter. The only drawbacks to their use are the amount of sloughing and the large scar; but to set against these we have the complete relief of pain in almost every case, and the fact, that of twenty-seven cases, in no fewer than seventeen, the inflammation never spread after the first incision. This latter fact is one of great importance, for it cannot for a moment be held that in so large a number the cessation of the diseased action was simultaneous with the incision treatment by accident. The relation between the two must, we think, be held proven; and the fact becomes more telling when we add to it, that of the six exceptions in which the disease spread, in none did the spreading continue more than five days, and in none were more than three incisions needed. Now, it happens, that a large majority of carbuncles occur in positions in which the avoidance of scar is a matter of no moment; and in those where it is important—the face for example—the disease is so dangerous to life that in its treatment considerations of personal beauty cannot be allowed much weight.

As to the employment of escharotics, there is this great objection, that if used effectually they must cause at least as much sloughing as the knife, while they do not much mitigate the pain. It cannot be assumed, that because nitric acid has been applied over a small portion in the centre of a carbuncle (Case 36), and a cure results, that therefore the acid was the curative means. In all probability the case referred to is an example of almost spontaneous recovery, as far as local means were concerned. In cases in which the spreading is progressing fast, and the danger to life is great, the treating of the cut surface with an escharotic would probably give much additional security of arrest. In the fearful cases of acute carbuncle affecting the face, such a plan would be well worth a trial. As to the form of caustic, the acid nitrate of mercury is a great favourite with Messrs. Startin and M'Whinnie, at the hospital for skin diseases, and applied with a glass brush is very convenient of use. At St. Mary's hospital Mr. Ure has recently employed the potassa fusa for the same purpose.

*Indigo in the Urine.*—Dr. Arthur Hill Hassall has, in a communication to the Royal Society, stated, that this substance is more commonly present in urine than he was led to anticipate from his previous inquiries. He also gives additional proofs that the colouring matter is really indigo, by having succeeded in converting it into *isatine* and *aniline*; for this purpose it is necessary to obtain the pigment in considerable quantity. Contrasting its chemical and physiogical relations with hæmatine and urine pigment, he shows that indigo is closely allied to those substances, and he considers that when it is found in the urine in any amount, it forms a vehicle for eliminating excess of carbon from the system. This view is borne out by the important fact, that the greater number of cases in which indigo has been observed to be developed in the urine in large amount have been when the decarbonizing functions were greatly impaired, as in extensive tubercular disease of the lung, and in most cases of cholera.—*Lancet.*

*Collodion.*—Different proceedings have been instituted to give collodion a greater amount of elasticity, with or without increasing, by the addition of certain substances, its therapeutic properties. Although experience has not yet pronounced upon the value of these trials, we give the principal forms of preparation.

1. *Elastic Collodion.*—Three formulæ are indicated: the first is due to M. Robert Latour, who employs impermeable coverings for the cure of local inflammations.

Collodion ℥iss. Venice turpentine gr. iii. castor oil ʒij.

The fluid must be spread in a tolerably thick layer, by means of a brush, over the affected part.

A simpler but less solid form is the following:

Collodion, 40 parts. Castor oil, 5 parts. Mix.

The castor oil may be replaced by glycerine.

M. Semoine (Bulletin de Thérapeutique) advises the employment of collodion and bird-lime (collodion a la glu). The difficulty is, however, to obtain the lime in sufficient purity.

2. *Medicated Collodion.*—The good effects following the application of this substance to affected parts of the skin has induced M. Aran to recommend—Collodion, 100 parts. Tincture of perchloride of iron, 100 parts. Mix.

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## HARDWICKE FEVER HOSPITAL.

### *Lectures on the different Complications of Fever.*

BY DR. GORDON,

PHYSICIAN TO THE HOSPITAL.

### Lecture III.—*Splenic Complications.*

In forty-six fatal cases of typhoid fever detailed and analysed by Louis, we find only four in which the spleen was not affected; these affections consisted in alterations of size, consistence, and colour; it was frequently double its natural size, and was in some cases still more enlarged, even to five times its normal state. Softening was found in various degrees; in some cases it is stated to have been extreme.

Chomel states, that next to the intestinal follicles, the spleen is the organ most frequently found diseased in cases of continued fever:—"In almost all cases it is found enlarged; and at the same time that it increases in size, it loses its density in a remarkable degree." In three cases he found the spleen to be perfectly diffluent.

Andral's observation was, "that the spleen is one of the parts which has been most frequently found changed in individuals who have died of continued fever; in the great majority of cases, we found it perceptibly increased in size, and very much softened."

The French physicians in general have hence inferred that hyperæmia of the spleen is a constant appearance to be looked for in all cases of continued fever.

In our own country, Christison, in the article on Continued Fever, in the Library of the Practice of Medicine, writes: "Of the *great viscera* the spleen is very generally found much softened, of a dark bluish black colour, and much enlarged."

The writer on "Fever," in the Cyclopædia of Practical Medicine, goes farther, and states that "the spleen is very generally altered in structure in fever; this alteration consists in unusual softness, in some instances to such a degree that the organ is reduced almost to a pulp, and breaks down on the slightest pressure; it is generally accompanied with enlargement, though seldom to any considerable extent, while its colour is changed to a very dark purple, or reddish black."

There can be no doubt of the spleen being generally found, to a certain extent, enlarged and softened in those who die in the early stages of typhus fever; our post mortem examinations in this hospital, in such cases, generally exhibit those appearances. In order to determine the gravity of this affection, we will first consider what it is not indicative of.

Softening of the spleen, in ordinary cases of typhus fever, is a fact which we are familiar with, rather from observing it in our post mortem examinations, than from any symptoms by which it is indicated during life; even in cases where we may suspect its existence, the proofs are often very vague and deceptive.

We cannot, then, look on it as an inflammatory affection, inasmuch as it is not during life attended with any symptoms indicative of local inflammation. The other reasons which Louis relies on as proof of the non-inflammatory nature of this ordinary splenic derangement are, that this state of hyperæmia never passes into purulent infiltration, which we know to be the result of inflammation originated therein by other causes; secondly, the homogeneousness of this abnormal state. It pervades equally the entire visceral structure of the organ, and does not appear to be more or less intense in one part than in another; contrary to what is usually seen in ordinary attacks of splenitis, where, as in other parenchymatous inflammations, we find different degrees of the inflammatory process existing at the same time. This fact is clearly proved by the numerous drawings, preparations, and coloured casts, contained in this Richmond Hospital Museum.

The third fact which Louis relies on as proof of the non-inflammatory nature of this splenic derangement is, that the investing membrane never presents any of the anatomical appearances of inflammation, as most probably would occur if the internal hyperæmia were in all cases owing to this cause.

This splenic hyperæmia, then, is not produced by inflammation, neither has it any connexion, as was at one time supposed, with an ulcerated condition of the intestine. This latter is not a necessary anatomical lesion, on the contrary, it is very rarely found in the congestive stages of true typhus, in which enlargement of the spleen is so frequent; but even in the true dothinenteritis it has been most satisfactorily shown that enlargement of the spleen is not a necessary occurrence; that when it is found, its size or softening bears no relation to the severity or extent of the intestinal ulceration, and that many cases of most extensive follicular ulceration occur in which there is no hypertrophy of the spleen. These facts were long ago proved by the three French authors above quoted, and by others, and our every day experience here confirms their observations.

I cannot, however, agree with Louis in either of his conclusions on this subject of splenic hyperæmia; first, that as yet it is not possible to determine the nature of the lesion; and secondly, that this alteration of the spleen "has something special and characteristic in patients affected with typhus." It is caused altogether by great congestion or stasis of blood in the spleen, analogous to a similar lesion of the lungs, but which we are more familiar with because we can so much more frequently recognize its existence during life, and we find it in all its different stages in our dissections; but the congestion of the spleen differs from that of the lungs, inasmuch as while in the latter it is generally partial and confined to the inferior and posterior parts, in the spleen it is always uniform, and often appears excessive, on account of the width and freedom of communication between the intra-trabecular spaces and other accommodation which this organ naturally possesses for holding an unusual quantity of blood. The depression of vital power, which it suffers in common with all the other organs, by diminishing or totally removing its contractility, is also favourable to this hyperæmic condition.

Andral has remarked, and I have myself frequently repeated the experiment in this hospital, that by gently passing under a stream of water a spleen in this state of simple hyperæmia, we can easily wash out the blood and reduce the organ to its original size, when we find its structure unaltered, contrary to the assertion of a writer above quoted.

But again, if this splenic hyperæmia were produced by mere congestion, we would expect to find it most intense about that period when patients usually die with great general congestion of the viscera, and such is the case. In Chomel's dissections, he found it greatest "in the most acute stage of the disease, before the twentieth day;" and Louis remarked, that it was most constant during what French physicians term the *second period* of fever, which dates from about the seventh or ninth, to the fifteenth or seventeenth day; and it is rather an unusual occurrence to find it in persons who have died from any local or accidental affection, after this period. In what Chomel has so vividly described as the third period of typhus fever, or towards the end of it, the time of stasis of the circulation, or of retardation of blood in the viscera, has nearly expired; and in the increasing appetite and more free respiration, we see evidences of a return to healthy action in the digestive and respiratory apparatus. At this time, also, the circulation becomes better established; and from this cause, and the restoration of its contractile power, this reservoir is emptied of its superabundant quantity of blood, and again returns to its normal state. We know that at this period, after the congestive stages have passed off, frequently the patient dies from debility, exhaustion, or some local accession, or complication. In such cases it often occurs, that the more fluid particles of the blood have been transmited, while the fibrine has, more or less, been deposited. Such is the cause of the tough or hardened condition of the spleen, which is often met with in cases who have died in the very last stages of typhus, or from some of the above causes. This pathological condition was long ago noticed by Cheyne, in his dissections of fever cases in this hospital, and has been noticed also by the writers on fever above alluded to, Louis, Andral, and Chomel, of whom the last, in his description of it, says: "In other cases, instead of being softened, it (the spleen) presents a degree of consistence which it seldom presents in health. Thus, in Case No. 13, in whom the spleen was double its proper size, it was, at the same time, exceedingly dry, and seemed not to contain any blood. *It is usually after the thirtieth day, and when the other organs are returning to their natural condition, that we observe this modification.*" We can readily understand how this induration of the spleen is perfectly compatible with a diminution, as well as increase of its size, and accordingly we meet with it under both conditions.

We conclude, then, that hyperæmia of the spleen is a frequent post mortem appearance in those who die in the congestive stages of typhus; that it is not indicative of any inflammatory action having existed; that it is not *in such case* attended, during life, with any peculiar symptoms, but that when by palpation and percussion it has been discovered, it is to be looked on merely as an additional evidence of a depressed and enfeebled state of the system, requiring a proportionably exhilarating and strengthening plan of treatment. Unfortunately, however, it does not always happen that this hyperæmia of the spleen is dispersed, when the other symptoms indicate the approach of convalescence. In such a case, the effect of quinine is often most remarkable, in the rapidity and permanency with which it reduces the size of this organ. It sometimes requires to be assisted by a strong stimulating liniment applied over the left side; and if there be much tenderness on pressure, the application of a few leeches, or, what is preferable, the abstraction of a small quantity of blood by cupping, will not interfere with its action.

If remedial measures be neglected, and sometimes even notwithstanding their use, the congestion becomes permanent, and the patient begins to suffer inconvenience from the increased weight of the organ; and the other usual symptoms of chronic splenitis ensue. This splenitic plethora is often combined with fatty disease of the heart. Congestion of the spleen is very frequently found in cases where, from any cause, the free return of the venous blood to the heart is obstructed; but if it does not also originate in an enfeebled left ventricle, at all events its return to health from a state of hyperæmia is impeded thereby. But that it frequently has its direct cause therein is sufficiently proved by a softened condition of the spleen being so often found to coexist with that secondary local lesion of the heart, so fully described by Dr. Stokes.

To asthenic or passive hyperæmia of the spleen sometimes succeeds inflammation, which, like the same action in the other parenchymatous viscera, when unsubdued, passes into suppuration. The abscess may be circumscribed by adhesive inflammation. If it be not circumscribed it will continue to engage the adjoining structures; or, as frequently happens, suppuration commences in different points of the spleen at the same time, and several minute abscesses form. All these gradually increase, until at length they coalesce, and engage the entire viscus. I have thus more than once seen the entire contents of the capsule of the spleen evacuated by a single incision, which gave exit to a large quantity of thick purulent matter. It sometimes occurs that the inflammation spreads to the capsule itself, which then presents all the usual anatomical appearances of inflammation of a fibro-serous membrane.

In this latter case the symptoms are usually very distinct, and require the same active treatment as inflammation of the serous membranes generally; modified, of course, by the recollection that this is a phlogosis supervening on a powerfully depressing illness. In point of diagnosis it is to be distinguished from diaphragmatic pleurisy, or inflammation of the peritoneum, or of any of the adjoining viscera within the cavity of this membrane. Unless the capsule be implicated, the symptoms of suppuration in the parenchyma are usually very obscure; but the frequent rigors, terminating in flushes of heat and profuse perspiration, indicate an internal abscess, while the deep-seated local pain caused by pressure points to the spleen as the seat of it. It has been most satisfactorily proved that the typhoid congestion of the spleen is not necessarily connected with the follicular ulceration of the intestines; neither is abscess of the spleen, which would appear to be as rare a complication of the ulcerated intestine as abscess of the liver. Like the latter affection, I have more than once known it to produce what has been elsewhere termed vicarious discharge from the mucous membrane of the intestines, and so the original disease has been overlooked. In Andral's Pathological Anatomy there is a very remarkable case of a child "whose spleen was literally converted into a cyst full of pus. The child had, during life, complained of violent pain in the left hypochondrium, accompanied with continued pain and symptoms of irritation of the meninges. In this case the suppuration of the spleen gave rise to the usual train of symptoms which proceed from irritation of the gastro-intestinal membrane; but on dissection the whole of the alimentary canal was found perfectly healthy, as was also the brain."

I expect, on another occasion, to enter more fully on the subject of diffuse inflammation as a complication of typhus fever, so that I would here only observe that the spleen is very frequently the seat of those purulent deposits which are found in the internal organs in this disease; the looseness of its tissue is of course most favourable to the rapid spread of the abscess; yet we more usually find three or four abscesses of small size contained in it than one large purulent collection; hence we infer that the spleen does not become engaged early in this affection, for as has been stated on eminent authority, "of all organs affected by the absorption of a product of inflammation into the blood, the spleen is the most liable to be attacked."* And yet, if with a texture most favourable to the spread of suppurative action, we actually find the products of inflammation less advanced in this than in other organs; we can only refer the slowness of its progress to the late period of its development.

We occasionally find in the spleen of patients who have died of fever an apparently heterologous deposit dispersed through the organ; they are of small size, usually of arborescent form, very soft consistence, and violet colour, and very similar to the appearances presented in commencing phlebitis before purulent matter has been formed. Dr. Ogle has laid several preparations, apparently of this nature, before the Pathological Society of London, and it is remarkable that they have almost all been accompanied by other anatomical evidences of a pyogenic diathesis.

These, and other unorganized tumours occasionally found in the spleen in typhus fever, have been described, and by very high authorities, as typhous deposits. Some considering them as specific typhous matter which had existed in the blood, and with the deposition of which the disease localizes itself, and terminates; while others, acknowledging the local importance of this deposit, altogether deny such action in the blood. It is remarkable that among the different authors who have written on this typhous deposit, none agree in their description of the appearances presented by it. This, however, may be owing to different writers describing it in different stages. It is found to consist principally of fibrine; but the question is still agitated, whether this fibrine is normal, or whether it has undergone any specific change.

There seems to be little reason why we should not consider this deposit as the same in its nature (though differing in size and extent) with the morbid appearances which we have above described, as originating in simple hyperæmia of the spleen. An originally fluid deposit of vitiated blood takes place into the interstices of the tissues, which, in unfavourable cases, passes into a state of softening or suppuration; while in those who recover, or die of some other affection, the fever having passed off, the fibrine may be deposited, and become organized, causing the "fibrinous deposit," of various sizes and consistence, found not merely in the spleen, but in the liver and lungs. This deposit of fibrine may again, in an unhealthy constitution, or one predisposed to tuberculosis, take on an unhealthy action: and perhaps we have in this the reason of the extraordinary rapidity of phthisis, when it supervenes on typhus fever, that the process of irritation commences over an immense extent of surface—namely, in all those particles of half organized fibrine, the remains of vitiated blood, deposited by one or all the different causes which give rise to this phenomenon in fever. The form of phthisis which occurs during a convalescence from fever, or immediately subsequent to it, is almost always characterized, as to its anatomical appearances, by a most extensive deposit of minute tubercle; and it is to be observed, that the most eminent pathologists assert that histologically this typhous matter is perfectly similar to scrofulous deposit, and consists essentially of the same elements. There is one fact, however, to be noticed, and this it is, perhaps, which has caused this deposit in the spleen to be considered as typhous, and of a specific nature—namely, that there are cases in which we find these half-softened spots or tumours dispersed in great numbers through the enlarged spleen, but no appearance of any suppuration, or of the ordinary progress of parenchymatous inflammation. I have seen such cases from time to time in this hospital, and they were characterized, even during life, by more or less peculiar features. They still are met with sporadically; but they existed, as if epidemically, in the years 1847-8. From my notes and observations on these cases I will endeavour to give you an account of their peculiarities in my next lecture.

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## Observations on the Kissingen Springs.

BY J. K. BARTON, M.B.T.C.D., L.R.C.S.I.

The spas of Germany seem to be considered by many well-informed practitioners in this country, who have never had the opportunity of visiting them, as very good places where the overfed alderman may drink and bathe away his superfluous fat; or where the overworked professional man may, for a month or so, recruit his strength with fresh air and rest. But the idea that any of these waters, if properly used, may successfully combat grave disorders is scouted; and they are looked upon very much in the same light as the homœopathic globule—a something which, under favourable circumstances, being believed in, works wonders. On the other hand, the German spa doctors, having drawn up a list of almost every disease which flesh is heir to, modestly inform us that their peculiar spring is an infallible remedy for all these. To avoid the evils likely to result from either of these extremes, accurate information concerning the properties of these waters requires to be more widely spread. Hence I am led to hope that the following remarks upon the springs of Kissingen, put together from observations made on the spot last summer, may not be without their value.

There are four principal springs at Kissingen, viz., the Rakoczy, the Pandur, the Maxbrunnen, and the Soolensprudel. The two first are chalybeate, the third is simply alkaline, and the fourth contains a large quantity of carbonic acid gas, and is almost exclusively used for bathing. The following is their composition, according to the most recent analysis:—

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* *Vide* Rokitansky's "Pathological Anatomy," vol. ii. p. 175.

| Quantity, 16 oz. | RAKOCZY. | PANDUR. | MAXBRUNNEN. | SOOLENSPRUDEL. |
|---|---|---|---|---|
| Temperature, . . . . . | 9° R. = 52° 25′ F. | 8°87′ R.=51°95′ F | 8° 75′ R.=51° 55′ F. | 15° 6′R.=65° 88′ F. |
| Carbonic Acid, . . . . . | 26·25 In. | 28·85 In. | 31·04 In. | 30·57 In. |
| Residue of Evaporation in 16 oz. | 85·41 Gr. | 76·06 Gr. | 30·27 Gr. | 171·85 Gr. |
| Chloride of Sodium, . . . | 62·05 | 57·00 | 18·27 | 107·515 |
| Do. of Potassium, . . | 0·91 | 0·25 | 1·002 | 0·979 |
| Do. of Calcium, . . . | ... ... | ... ... | ... ... | 3·993 |
| Do. of Magnesium, . . | 6·85 | 5·85 | 3·102 | 24·516 |
| Bromate of Magnesia, . . | 0·75 | 0·72 | ... ... | ... ... |
| Iodate of do. . . . | 3·00 | ... ... | ... ... | 0·062 |
| Carbonate of Soda, . . . | 0·82 | 0·03 | 0·380 | ... ... |
| Do. of Lime, . . . | 3·55 | 5·85 | 2·590 | 1·651 |
| Do. of Magnesia, . . | 2·50 | 1·62 | 1·825 | 6·412 |
| Sub-Carbonate of Iron, . . | 0·68 | 0·45 | ... ... | 0·355 |
| Sulphate of Soda, . . . | 2·00 | 1·75 | 1·860 | 25·301 |
| Do. of Lime, . . . | 2·50 | 0·75 | 0·651 | ... ... |
| Phosphate of Soda, . . . | 0·17 | 0·05 | 0·125 | ... ... |
| Silicic Acid, . . . . | 2·25 | 1·55 | 0·465 | ... ... |
| Alumina, . . . . . | 0·18 | 0·05 | ... ... | ... ... |
| Organic Extract, . . . | 0·15 | 0·09 | ... ... | ... ... |
| Loss, . . . . . . | 0·38 | 0·37 | 0·380 | ... ... |

The Rakoczy being the strongest chalybeate, and also containing the greatest quantity of salts, is the spring most drunk, and is very largely exported in strong stone bottles, in which, with the exception of the loss of a little carbonic acid gas, it is said to keep remarkably well.

A patient just arrived at the baths, and intending to make trial of the waters, begins by drinking three tumblers of this water before breakfast, a quarter of an hour being spent, between each draught, in walking about. Each tumbler contains six ounces. In a week or so, however, the full dose, viz., five or six tumblers, is regularly taken. The common salt gives it its chief taste, but an aftertaste of iron is very perceptible. The quantity of carbonic acid gas taken into the stomach in each draught being large, causes a disagreeable sense of fulness to many patients. To obviate this, pans of hot water are kept beside the spring during the drinking hours, into which the tumbler containing the water being placed for a few minutes before being drunk, the greater part of the gas is expelled. Taking the amount of iron given in the analysis as true, the patient, if he drinks six tumblers, will have for his morning's dose a grain and a-half of the carbonate of the protoxide of iron; and in a form much more favourable for assimilation than that in which iron is usually presented to the stomach. Its tonic effect on the stomach is apparent from the fact, that patients who, we may suppose, at home come down to their breakfasts about nine o'clock, we find walking about for an hour and a-half, or two hours, drinking these waters before breakfast, and then come in with a keen appetite; nor do they complain of the faint, sinking feelings, which certainly would be the result of similar exertion without this support. The quantity of salts contained in this water causes it, when taken in large quantities, to prove laxative; six tumblers in the morning usually producing two or three evacuations during the day. In many cases this laxative action, combined with its general tonic properties, is very valuable; but in cases where a tonic effect is alone desired, three to four tumblers will be found sufficient.

The Pandur contains less iron than the Rakoczy. It is, consequently, drunk in the afternoon in place of the latter. Three or four tumblers of this is considered *comme il faut.*

The kind of cases to which these waters seem peculiarly adapted, and in which I have noticed their beneficial effects, are chiefly two:—

1st.—Dyspeptic cases, in which the functions of digestion are remarkably sluggish, in which the most striking symptom is torpidity of the bowels. In such cases for many months no evacuation being procured without purgative medicine, the water acts as a sufficient laxative while they are being taken; and after their use has been persevered in for a month or six weeks, their tonic power is evinced in the returning vigour and tone of the system.

2nd.—Cases of blood deterioration, either appearing as chlorosis in the one sex, or the effect of dissipation or hard study in the other, and in which iron is generally employed with success, the assimilative functions being always more or less disordered.

The Maxbrunnen being alkaline without any iron, is diuretic in its action; and as it contains a large quantity of carbonic acid gas, is an agreeable drink.

A pleasant walk of about three-quarters of a mile from the village of Kissingen leads to the Soolensprudel spring, over which a very neat and well-arranged bath house has been built. The spring is intermittent, and the manner in which it ebbs and flows is very remarkable. After flowing continuously for three or four hours, it suddenly stops, then begins to sink, and in about three-quarters of an hour has reached its lowest limit. It then commences to return with, as it were, increased energy, boiling and foaming up to its former level, and exhaling, at the same time, a vast quantity of carbonic acid gas, to prevent the escape of which through the bath house, a heavy glass frame is placed over the mouth of the well, through which the foaming water is seen, and which, should the gas be generated in such quantities that the waste pipes below are unable to carry it off, is lifted up for a moment by the pressure of the gas within, and thus acts as a safety valve. All this carbonic acid gas is, however, not allowed to escape. Some of it is conveyed through pipes to rooms fitted up for administering gas baths. Two large roomy baths are placed in each room, at the side of which pipes containing the gas come up; attached to these are flexible tubes which, when the gas is turned on, conveys it into the bath. Being much heavier than air it fills the bath as water would, and escapes when it is full through an overflow pipe. The patient gets in with his clothes on, and sitting down so that his head is clear above the top of the bath, the wooden cover is pulled up, and a kind of oilskin cape being fixed round his neck, to prevent the possibility of his breathing any of the gas, he is left for half an hour.

By means of the flexible pipe, which, being fitted with a stop-cock, puts the gas entirely under the command of the patient, a jet of gas can be directed against any particular part of the body. If the stream of gas be strong it almost immediately produces a sense of heat and tingling in the part exposed to its action, which just lasts while the gas is directed on the part, ceasing whenever it is diverted. The clothes do not seem to offer any appreciable obstacle to its action on the skin. I tried it on my own arm, having taken off my coat and rolled up my shirt, and afterwards on the same part covered, and felt the same sensation both times, viz., a slight heat and feeling of tingling in the part. After remaining in the gas for about ten minutes a sensation of warmth begins to be felt over the whole body and lower limbs, which shortly increases to a decided feeling of heat about the lower part of the abdomen and organs of generation. Such have been my sensations in this novel kind of bath; and as far as I have been enabled to learn from others who have frequently employed them, they are the usual ones resulting from half an hour's immersion in carbonic acid gas. The most probable explanation of these sensations seems to be, that the gas acts as an excitant directly upon the sentient filaments of nerves distributed over the surface of the body; and, consequently, where these are supplied in the greatest abundance, the feeling of heat will be the strongest. That it stimulates the motor filaments, too, appears from the fact, that if the stream of carbonic acid gas, which very often rises from the bottom of many of the German baths, be allowed to come up against the scrotum, that organ will immediately begin to contract, with a feeling of burning heat at the same time, and soon become so contracted as to be extremely painful, and compel the patient either to leave the bath, or to shift his position so that the gas may be directed against some other less nervous part.

Close by the rooms where the gas baths are administered is a small room, fitted up for the purpose of directing the gas as a local stimulant to any organ or part of the body that may be desired. A large pipe containing the gas passes up through the middle of the room. From this come numerous flexible tubes, each fitted at the end with an ivory piece, shaped to cover the eye or ear, as it may be the course of a nerve. When this is fitted over the part the gas is turned on, and allowed to stream against it for some minutes, causing, in general, a prickling sensation similar to that produced by the bath, but more decided.

In the same building are to be had well-appointed vapour and Russian baths, and below stairs the *well* baths are in full operation. From the bottom of these baths the Soolensprudel water, at its natural temperature, is always gushing up, so that the bath is kept in a state of violent agitation. Into this the patient plunges for a few minutes; and it is said to have the same strengthening effects which sea-bathing has upon those it agrees with. In addition to the water welling up from the bottom of the bath, a douche can be thrown in from one end, and a shower from the other.

As a residence for patients during the summer months, while taking its waters, Kissingen possesses several advantages. It stands about 550 feet above the level of the sea, and is pleasantly situated among partially wooded hills, separated by wide fertile valleys. Walks, well supplied with seats, are cut in every direction. As it is in the kingdom of Wurtemberg no gambling is allowed, and, in consequence, it is free from the numerous sharpers who flock to all the Nassau watering places during the season, where gambling goes on, constituting one of the greatest drawbacks to these places, in other respects such pleasant residences during the summer months.

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## PATHOLOGICAL SOCIETY MEETINGS.

*December 2nd*, 1854.

MR. ADAMS IN THE CHAIR.

### *Calculus in the Ureter.*

DR. M'DOWEL exhibited a specimen of sacculated kidney, the result of the impaction of a calculus in the upper orifice of the kidney. The calculus was of a dumb-bell shape, large at each extremity, and contracted in the centre. The upper end projected into the pelvis of the kidney; the centre was tightly grasped by the top of the ureter, into which the lower end of the calculus had passed. It appeared to be composed of oxalate of lime. The corresponding kidney (the right) was much enlarged, and formed a fluctuating sac, being distended with urine and pus. A section showed the almost complete absorption of the cortical portion, whilst the tubular portion had been entirely removed, and in its place were four or five large cavities filled with pus and urine, and formed by the dilated calyces and infundibula.

The opposite kidney (the left) was in a state of hyperæmia, slightly enlarged, but healthy. During life there were no symptoms directly referrible to this lesion.

The patient, a young man of intemperate habits, was admitted into the Hardwicke Hospital, labouring under the symptoms of acute meningitis. In a drunken quarrel, two days previously, he had been kicked in the head. A few days afterwards he sickened, and complained much of headache.

On admission he was found to rave much; the pupils were dilated, and the muscles of the nape of the neck were rigid. Next day the dorsal muscles of the spine were similarly affected, so that the patient was unable to sit up. Retention of urine was superadded. The pain in the head continued unrelieved, as did the tetanic rigidity of the muscles of the nucha and of the spine; and on the fourth day severe convulsions set in, which continued at intervals for twenty-four hours, when the patient died. In fact, all the symptoms of cerebro-spinal arachnitis were present, with the exception of exalted sensibility of the skin.

*Post Mortem Examination.*—Lymph was found freely effused at the base of the brain from the optic commissure down along the medulla spinalis into the spinal canal. There was, likewise, much turbid fluid in the ventricles. The left kidney was found in the condition above described.

Dr. M'Dowel believed that there was no connexion in this case between the meningitis and the disease of the kidney, but that they accidentally co-existed, the injury to the head in a person of intemperate habits, being in itself quite sufficient to provoke arachnitis.

Inflammation of the brain and its membranes, no doubt, often was dependent on disease of the kidney; but the renal disease was, in such cases, generally the result of constitutional disorder acting on the kidney, by inducing a morbid affection of the blood; hence its symmetrical character, both kidneys being invariably affected. The specimen then brought forward was an example of a local affection of the kidney; and as such was contrasted with the specimens exhibited at the last meeting of the Society.

### *Tumour in Vagina.*

Dr. Fleming exhibited a specimen of that class of tumour termed by Lawrence, "cellular," by more recent authors, "fibro-cellular," and by Rokistanky, "gelatinous sarcoma." The weight of this fleshy mass, immediately after removal, was three pounds. Its form was most irregular; it was lobulated, and banded across its surface and margins by numerous broad fibrous expansions, differing in breadth and tension, so as to give it a most remarkable resemblance to folds of intestine, with mesentery attached to them. The colour of the greater portion of this tumour was a sort of ashen grey, with a pinkish tint, other portions being dark and congested, so as to render the above resemblance still more deceptive. It was smooth and glossy, and fibrous cords passed from its surfaces and edges, like so many tentacula. Around them were adherent portions of adipose tissue, and in many parts of the lobulated surfaces small masses of the same structure were visible, simulating much the appendices epiploicæ of the large intestines. Those several features of this remarkable tumour rendered the steps of the operation for its removal from its deep bed extremely perplexing. A very accurate drawing was exhibited, illustrative of the appearance which the tumour presented after its removal, when placed upon a flat surface. In its longest axis it measured beyond thirteen inches, and in different other portions six, eight, and ten; and although of so much weight as noted, its fibrous envelope was so dense and strong, though almost diaphanous, that it could be suspended from any one extreme portion.

The colour in the drawing is more vivid, than existed from being coated with blood and exposed to the air. When first laid bare it was of a lightish yellow, so as to resemble an ordinary fatty tumour. Its substance was remarkably tremulous when pressed upon or moved; and its projecting portions communicated a most deceptive sensation of a fluid floating within a tubular cavity. A section delineated in the drawing exhibited a mesh of fibro-cellular structure throughout, intermixed with bands and cords of varying thickness and density, and infiltrated with a synovia-like and serous fluid which exuded in considerable quantity.

There was much uniformity in the texture throughout, with the exception of greater compactness in some portions where it was tough and unyielding. No fat was traceable throughout it. It, in fact, bore an exact resemblance to a smaller tumour removed from a similar locality by Dr. Fleming about twelve months back, and presented at that time to the Society.

The subject of the present specimen was an unmarried girl, aged twenty-five or so, apparently in the enjoyment of rude health. She traced its origin to a period about six months distant; and attributed its formation to a fall she had from a chair on her left hip. Her principal local symptoms were pains in the loins, vesical irritation, latterly amounting to retention of urine, painful obstruction of the vagina, and difficulty in defæcation.

A sketch was shown of the locality of the tumour. It occupied the left buttock towards its back part, reaching to the posterior fold of the gluteus muscle, and extending in front along the left side of the anus and perinæum to the lower part of the corresponding labium. The integuments covering it were perfectly natural in colour and consistence, and moved freely over the tumour; although its projection was considerable, yet they were not tense. A few large veins traversed the surface; and, perhaps, some capillary congestion might be occasionally present. The surface was uniformly smooth; and there was, with much elasticity, a most deceptive sensation of fluctuation. Both vagina and rectum were mutually encroached on by its inward growth; and when it was firmly grasped by the hand, a fibrous solidity was communicated to the fingers, which strongly contrasted with the deceptive fluctuation from alternate pressure on its forepart. By slight traction it was evident that the tumour had strong fibrous attachments along the ramus of the ischia and pubes. The fingers could not reach above its vaginal and rectal relations; neither could the most minute examination detect any abnormal condition along the spine, or in the iliac or sacral regions above the pubes. The increasing bulk of the tumour, and especially its encroachment on the vagina and rectum, rendered the condition of the poor girl so uncomfortable and miserable, that she insisted on the adoption of whatever remedial means should be deemed advisable. It being found on exploration to be more or less consistent, and its history and appearance favouring the opinion of its cellular character, it was removed on Wednesday last. Its accurate resemblance in structure to that exhibited during the last session, in the case of Anne O'Brien, cannot be questioned. Its size was considerably larger, as can be seen by contrasting the respective drawings.

The connexions of this tumour were very deep, and its attachments by strong ligamentous bands very firm to the bones of the pelvis, particularly the pubis and ischium, a prolongation of it being traceable behind the symphysis, and along the side of the bladder. It is obvious, from inspection of its outline, that it has been completely removed; and, according to the report of Mr. Lyons, who has carefully examined its structure under the microscope—" It is composed of a very fine kind of fibres, closely matted together. Some are short, with a slight disposition to curl; others fine and straight throughout, but occasionally banded. There were, also, a few much elongated."

## BIBLIOGRAPHY.

### *Abstract of a Report communicated to the Society of Medicine of Paris, June,* 1854, *on M. Devergie's "Practical Treatise on Diseases of the Skin."* By M. Bourguignon.

[Concluded from page 333.]

Such are the reasons and the facts on which M. Devergie's conviction is founded. I do not know, gentlemen, whether doubt has ceased to exist in your minds, and whether for the future you will, without hesitation, attribute, in certain cases, the appearance of parasites on our integument to a spontaneous itch or to spontaneous generation. As for me, my doubt remains the same; and what surprises me most in this long dissertation, is the facility with which he deduces such absolute conclusions from facts which have no great scientific value. The arguments that M. Devergie adduces in support of his opinion are of two kinds: the one derived from speculative ideas—the other from special observation.

I say that M. Devergie has at first obeyed a preconceived idea; in fact that, in his opinion, all contagious diseases are to be attributed to spontaneous generation, or to direct contagion. He places in the same rank itch, favus, herpes acne punctata, and pedicular affections; and that without having experimented on one more than another of these diseases.

I would reply to M. Devergie that the pathognomonic character of the itch is not an eruption of pimples. If the itch was an eruption, this eruption would have special characteristics belonging to this disease alone, and not pustules, vesicles, and pimples, which are found on the hands in every other affection, even those not psoric. Besides, the word pimple is improper; it ought to be banished from dermatologic language.

According to you, I would say to M. Devergie, the acarus is produced in a vesicle or in a pimple. It is simply a material impossibility that it should be so; and if you had understood the importance of the respiratory functions of the acarus, which before my researches were supposed to breathe by tracheæ, you would not have made this mistake. An acarus, a larva, and, perhaps, an egg, cannot live shut up in a vesicle; immediate contact with the air is necessary to them. We cannot doubt this when we see with what care the acarus, while travelling along its groove, perforates the upper pariety of it from millimetre to millimetre; thus forming little openings, by means of which the respirable air reaches it, and by which the young acari can get out. The entomology, the physiology, and the pathology of the acarus mutually throw light upon each other. If I had adhered to the simple pathological ideas that you possess, I should have communicated many mistakes, and should not have known how to refute yours. But where are the facts by which you support yourself in saying that the acarus may sometimes be produced spontaneously in the pimples? When and on what premises have you ever proved a similar phenomenon, which more than any other requires the use of the moveable microscope, which you have never employed? In what state would you suppose this acarus which would be produced spontaneously to issue from the skin? Are you of the school of the panspermists, or of the ovarists? Is it as a simple imponderable germ, or as an egg? All these capital questions have not even been proposed. You tell us that the vesicle or pimple, which is connected with the groove, originally contained the acarus. I thought I had proved, in an irrefutable manner, that there is no direct communication between the vesicle and the groove. In fact, with the assistance of the microscope, it is always easy to discover the point of the entry of the insect and the commencement of the groove, which could not take place at the beginning of the disease, if the acari were from the first produced under the skin.

This point of entrance is often the seat of a particular irritation, on account of the disorder that is caused by the mandibles of the insect or the nails of the patient; but there are never at the commencement of the groove distinct vesicles or papulæ.

The acarus avoids the vesicles, which, if they burst, would inundate it, or would clog and infallibly kill it.

It is not without good reasons that I have made use of the microscope to assure myself of these minute details, and to substitute direct observation for speculative theories.

I have difficulty in understanding why you have not given yourself the trouble of verifying the reality of the hypothesis on which you found your doctrine. It is wrong to neglect the use of the moveable microscope in the study of diseases of the skin. It would lead with certainty to important discoveries, and would render undoubted services to naturalists and physiological observers.

M. Devergie considers it an important fact that in pustular itch the number of acari is in an inverse ratio to that of the pustules. He finds it difficult to conceive how the acarus could be so rare if it were the cause of the eruption. Nothing is more easy to answer, however. M. Devergie comprehends better than any person the influence of the temperament on the form of eruptions. Every lymphatico-sanguineous person who takes the itch finds the pustules predominate on him, as the papulæ predominate in a nervous individual; but ten pustules on the hands occupy a patient more, and with good reason, because they are more burdensome and more grievous than a hundred papulæ; they constitute a more manifest disease of the skin. "Has there not been a first acarus," says M. Devergie, "with whom there has been no transmission; and if the acarus has been spontaneously developed once, can it not show itself a second, third, or hundredth time?" I hesitate really to reply to an objection so full at once of simplicity and of controversy, because it touches on the primordial creation of beings. In fine, according to M. Devergie, by that fact alone that animals, in general, have been a first time created spontaneously (he, probably, means to say without the intervention of a creator), it would follow that one could prove the spontaneous generation. I oppose to this affirmation the philosophical doubt, which overwhelms me every day, when I compare the unchangeable immensity of the worlds that gravitate in space with the weakness of our intelligence.

M. Devergie opposes to me M. Bidard's statistics, which I accept as correct, in spite of its material errors in figures, and which tend to prove, contrary to my opinion, that the acarus may be easily transmitted without any contact with a person having itch during the whole night. He mentions a total of 541 patients, among whom four individuals had acquired the itch at balls, three by tools, one by taking care of a person with itch, and one by sleeping on rags, one by wearing shoes bought at the temple, and one by rubbing a dog.

If these facts had the least value, far from refuting, they would support my opinion; but I refuse them as resulting from information given by patients incapable of appreciating the cause of their diseases, without speaking of the inexperience of M. Bidard, who believes in the contagion of the itch from the dog to the man, when the psora of this animal is still to be discovered.

M. Devergie objects again to those who attribute the itch to the acarus, that this affection is cured spontaneously on the occasion of an acute general disease, and reappears on convalescence. It is demanded, what becomes of the pimples and the acari during this long space of time, and why new pimples arise with the return of the acarus.

This objection errs in the foundation. An acute, general, and intercurrent disease does not cure the itch, but only arrests its development. The acarus requires a territory where it will find humours with certain qualities to absorb, a temperature suited to its wants, &c. Certain parasites live only on plants and weak animals. The human acarus—and it is a fact that it is important to observe—prospers and multiplies on individuals in the best health; it perishes, and is no longer engendered, on weakly subjects. You ask me why—I am as ignorant of the cause as you are.

M. Devergie believes that the acarus results in certain cases from an individual predisposition, and that certain constitutions are not only little favourable to the spontaneous production of this disease, but are refractory to the direct contagion of the acari. He quotes, in support of his opinion, the example of M. Gruby, who offered himself to him one day to receive the acarus, and who could with impunity give them an asylum on his skin for eight days, without being in the end affected by the itch. We must also add, that the experimenters imprisoned some acari under a little watch crystal, firmly supported in its place by bandages; that is to say, ignorant of the wants of these parasites, they put them in a position where it was absolutely impossible for them to transmit the disease by asphyxating them. Astonished that I had been able every day for two years, and for whole hours, to take the hands of persons with itch in mine without having contracted the itch, with the effects of which I wished to become perfectly acquainted by giving it to myself, the idea occurred to me, as to M. Devergie, of placing some acari on my left wrist and covering them with a watch crystal; but it was in vain that I expected the progress of the infection. I raised the apparatus, and I found the insects dead in their prison. It was the same, more lately, in the experiments made in the service of M. Bazin, with regard to the studies on the contagion of the acari among animals of different species. M. Piogey, who has kindly lent me his assistance in these investigations, placed on my arm some acari from a horse, and we found most of them dead, as was to be expected, forty-eight hours afterwards. But little air and little room are, no doubt, necessary to sustain the life of these little parasites; but they cannot accommodate themselves to the vapours that the skin gives off under a little watch crystal during eight days, and at the end they die of it. These experiments failing in their object, I took a female acarus in the best condition of vitality; I deposited it on my arm, and with my eye at the eye-piece of the microscope, I followed it till it was completely buried under my skin. This time the inoculation had all the desired success; I had a very fine itch. I am convinced that the skin of every individual in good health is a fertile soil where *our* parasites, if deposited in freedom, will be very well able to live; and if M. Gruby is ready to recommence the experiment, I promise him the most complete success.

M. Devergie quotes three observations, which are, in his opinion, proofs that the acarus may appear without direct contagion, or reappear spontaneously after having been cured under the influence of an intercurrent disease.

M. Devergie concludes, that in these cases the acarus disappears, to arise again spontaneously. These observations, to keep within the terms of a moderate refutation, have not the importance that M. Devergie attributes to them.

They prove that the itch easily allows itself to be concealed by other more general affections, which, once cured, no longer oppose the manifestations of the symptoms of this disease.

Finally, M. Devergie supports his theory on the curious observation of M. Boeck, in which a new form of itch is presented to us in the person of a young girl who was covered with scabs, composed in a great part of acari. I do not see of what importance this unknown form of itch is to the spontaneous generation.

M. Boeck has just sent me a few lines, by which he informs me that, except in form, this new variety of itch, of which he has since observed other examples, is like the common itch. I could, in the same way, gentlemen, bring forward all M. Devergie's arguments and refute them as peremptorily without exception.

M. Devergie has praised my wise reserve: why has he not imitated it? Or, if he wished to raise the mysterious veil that still covers the generation of parasites, why has he not, according to Bacon's precept, divested himself of all his preconceived ideas, to absorb himself in the contemplation of facts? It was so fine a field to explore! This subject of the generation of parasites has also attracted our attention; and some still unpublished works will, perhaps, throw light on the solution of this problem. We have been led to consider generation not spontaneous, because the word spontaneous, which does not signify the observance of perceptible causes, is nonsense when applied to positive sciences; but the parasitic generation of acari, not that we understand by parasitic generation that which would result, as the panspermists suppose, from the plastic power of inert matter, but rather, after the example of the ovarists, from the incubation, at first latent, then manifest, of the germs, or ovula, transmitted by means more or less known. In a word, I do not believe in the generation called spontaneous, but in parasitic generation, resulting from pre-existing generation in the cavities or organs, where they have been transported by means of absorption. Parasitic generation may, or may not take place, according to the state of health or disease of the individual plants, or animals, which carry the germ of it. Every physiologico-pathological inquiry requires a certain scientific method, or else everything is error and confusion. It is clear, for example, in the question which occupies us, that it would be necessary, in order to find out the positive laws of parasitic generation, to proceed from the simple to the compound, that is to say, on one side the parasite, on the other, the individual, plant, or animal, on which it can live.

However that may be, our studies on the itch in animals have increased the number of facts on which this great law rests, namely, that the parasites, and acari in particular, live and are multiplied only on individuals pathologically troubled in their health. We have thus transmitted to six sheep of different ages, but all in a perfect state of health, some hundreds of acari, male and female, isolated and in pairs, without being able to give them the itch; at the end of some days these died successively, after having vainly endeavoured to support life.

But these same sheep, subjected for some months to a debilitating *regime* which rendered them chlorotic, and as if struck by a cachexia, become predisposed to the parasitical generation, *intra and extra*, to such a degree that entozoa were found in the parenchyma of their internal organs, and a single female acarus, fecundated, produced the itch, and even eggs deposited on their skin developed the disease with frightful rapidity.

The influence of good pasturage and good care, on the production of the itch, or its disappearance, among flocks, is such, that the Germans have thought that the itch arose spontaneously.

The skin of sheep frequently exposed to the rains of Autumn or of Spring, badly fed, shut up in the midst of the warm and suffocating atmosphere of the sheep-folds, frequently become the seat of a particular disorganization. The epidermis softens and swells, and alterations take place here such as we see produced every day in animal and vegetable substances when decomposed, which develope the principles necessary to the animation of germs, and give birth to acari.

But it is well understood that the sheep, as well as other animals, also plants, fruits, and organic substances carry germs ready to become animated, if the pathological conditions exist necessary to call them into life. We here find a mode of generation not at all similar to that which has presided at the original creation of these parasites. Germs of parasitic generation are found in the air, in water, in food; animals absorb them every instant; the skin itself conceals them, without the health being in the least injured by them; but if a pathogenic condition favourable to their organization appears, these parasitic germs, being direct products of an animated being, will give rise to a living being, endowed, after successive metamorphoses, with sexuality, and capable of reproduction.

But M. Devergie will say: "If things happen in this way, our difference is more in words than ideas; substitute, if you insist on it, the word parasitic for spontaneous, and then my doctrine rests complete, since, by your confession, animals carry on their germs of acari ready to come to life; the same may be the case with men, who, in certain given circumstances, will see the acarus of which he possesses the germs."

M. Devergie might be right; but unfortunately facts are opposed to his theory. Parasites are developed on animals both by direct contagion, and by the animation of the germs, but only when they are in certain given pathological conditions; and it is exactly the contrary with men, from whom the acarus demands positive conditions to live and develope itself to so great a degree that it prospers on individuals in perfect health; so that, according to the special laws that preside at its development, if it could be produced by animation of germs hid on the skin, it would be on healthy, and not debilitated individuals that it would appear; and as we have not yet scientifically proved the parasitic generation of the acarus on the healthy or sick man, without the direct transmission of the insect itself, we cannot say that in him, as well as in animals, the itch can arise without direct contagion. This exception to the general law is repugnant to our spirit of generalization. It would seem to us more philosophical to see the acarus of man subjected to the law of parasitic generation. Perhaps we shall one day discover the positive reasons which make it an exception to the usual law. But we ought for the present to rest within the domain of facts; and when the pathological predisposition, which is indispensable for the animals that the acarus may attack, is no longer necessary for man to make a provisional exception in its favour, until studies, methodically instituted, permit us to say decidedly whether the parasitic generation which produces the acarus is or is not subject to the general laws of parasitogenesis.

M. Devergie, then, is wrong in supposing that the acarus arises from want of cleanliness, privations, from the abuse of alcoholic liquors, from exhaustion; in a word, from all the calamities that ignorance and misery produce. Too many persons live daily in Paris in these circumstances without having the itch, and our chiffoniers are striking examples of it. As a last analysis, M. Devergie has not demonstrated the parasitic generation by satisfactory facts, and still less the spontaneous generation of the acari of the itch in man.

I have finished the task that I had imposed on myself. I have undertaken it for the purpose of substituting a philosophical doubt for a spontaneous faith in a theory which is seducing but dangerous. If M. Devergie understands my intention, I shall be happy to have discussed his opinion with the impartiality which every scientific question demands.

## EXTRACTS FROM BRITISH AND FOREIGN JOURNALS.

### *Nature and Pathological Anatomy of Œdematous Laryngeal Angina.*

Its essential character is an *infiltration of the cellular tissue of the arytenoid-epiglotteal folds.* This rarely is found in a simple condition, independent of all local phlegmasia; but usually traces its origin to some acute, subacute, or chronic inflammation of the throat, larynx, or neighbouring parts. For the most part, too, besides the local phlegmasia, a spasmodic condition of the glottis is also present. M. Sestier considers the term *œdema glottidis*, by which the affection has been usually designated, a faulty one, the upper orifice of the larynx being much oftener the seat of the effusion than the *cordæ vocales*. In going over published cases, he has, too, found considerable embarrassment produced by different authors designating various parts of the larynx as the glottis. The effusion is, however, not always confined to the arytenoid-epiglotteal folds, and is frequently found under the epiglottis, the interior of the larynx and the fauces, extending in rare instances even to the trachea and bronchi. Each of these localities is passed in detailed review by M. Sestier.

Usually, both *arytenoid-epiglotteal folds* are affected, and to the same extent, but occasionally only one side is so. More or less obstruction or deformity of the upper orifice of the larynx results; but this is by no means always found, after death, to be proportionate to the amount of difficulty of respiration; and that because the tumefaction may have in part subsided, while much of the difficulty during life may have been due to spasm. The effusion has been found to be serous in seven-ninths of the cases, and sanguinolent or purulent in two-ninths.

In the eighty-one cases in which the condition of the *epiglottis* has been recorded, it has been infiltrated in seventy-four, acquiring sometimes a very considerable size; and, as its tumefaction is almost always in direct relation to that of the arytenoid-epiglotteal folds, its exploration may prove very useful in diagnosis and prognosis. *Intra-laryngeal* infiltration has been found in fifty-two of the seventy-two cases in which the incision of the larynx has been noted, it being sometimes general, and at others only partial—the *cordæ vocales* usually being implicated, and a narrowing, or even obliteration of the glottis, resulting. As the obstruction of the *cordæ* is a fixed one, there is not merely an impediment to inspiration, as in the valvular obstruction offered by the arytenoid-epiglotteal folds, but likewise of *expiration;* and the danger is proportionally increased by there being now two obstructions, and the more complete character this one assumes. Œdema of the *fauces* is pretty frequently met with, but is often only partial: it is of importance as announcing the probability of intra-laryngeal infiltration, especially in patients suffering from anasarca. Among 132 patients, œdema of the *trachea* has been met with but six times, and of the *bronchi* but once.

*Symptoms and Course of the Disease.*—In four-fifths of the cases some degree of pain, or of the feeling of a moveable foreign body at the top of the larynx, was early complained of. The voice is noted as altered, being at first feeble and hoarse, and becoming at last nearly or quite extinct. The respiration is always embarrassed, suffocative paroxysms occurring at intervals. The inspiratory movements are especially laboured; but when the interior of the larynx is also affected, expiration may be equally difficult. The cough is short and stifled, and is preceded by the sensation of a foreign body in the larynx. By auscultation we find the pulmonary murmur is much enfeebled, and masked by the abnormal *souffles* and *râles* heard in the region of the larynx. Deglutition is usually difficult, and sometimes impossible. On inspection, œdema of the uvula and of the velum palati will often be observed, the epiglottis being also much swelled, and sometimes rolled back on itself. The *pathognomic* indication of the disease is obtained by passing the forefinger to the seat of the effusion; but although most valuable information may be thus obtained, it often happens, from the inflamed state of the throat, or the spasmodic resistance of the muscles, the attempt even cannot be made; or if the finger is passed down, its contact is too transient to obtain the desired information. In many cases it is not mentioned whether such passage had been attempted; but in forty-four at least it was performed with success. The patient usually remains seated on his bed, his face being of a leaden pallor, his lips violaceous, and his expression exquisitely anxious. Fever is absent, or present in variable degrees. Sleep is difficult or impossible. In relation to the *invasion* of the disease, it is to be borne in mind, it often comes on during other affections, and is not unfrequently preceded by œdema of the fauces. In some cases it comes on quite gradually, but in others almost suddenly. In thirty out of thirty-five in which the time was noted, it came on in the evening or at night. The dyspnœa, which is the dominant characteristic of the disease, is sometimes continuous, but in about three-fifths of the cases it occurred in paroxysms of varying violence, which were especially induced by the horizontal posture, attempts to swallow or speak, coughing, emotions, and the evasion of sleep at night. In the intervals the larynx never regains its normal conditions. The *duration* of the disease is very variable, from some minutes to several weeks—the mean duration being about four days, in cases dying without operation. The form of the disease following guttural inflammation is remarkable for the rapidity of its termination, as is that connected with anasarca. The cases connected with laryngitis are often of slower progress. The fatal *termination* sometimes occurs during or just after a paroxysm, and at others during a deceptive calm, it being not seldom sudden and unexpected. Of fifty-one deaths, thirty-five occurred between 10 P.M. and 10 A.M., and sixteen between 10 A.M. and 10 P.M.

*Treatment.*—This requires to be resorted to with promptitude, and where it has been so, rapid cures have sometimes resulted. Insidious remissions are, however, especially to be guarded against. No one remedial agent can be relied upon, but a variety must be employed simultaneously or in quick succession. As a general rule, the more direct the infiltration can be attacked the better, general therapeutical agents being employed chiefly as preparatory and adjuvatory to this.

In the indirect or medical treatment of these cases, *blood-letting* is an important agent. But even in cases in which it is distinctly indicated it is alone insufficient, and the attempt to vanquish the disease by its reiterated employment fails, and only exhausts the powers of the patient. A *large blister* applied over the front of the neck should hardly be ever omitted, it being as important an agent here as free vomiting in croup. When the patient can swallow, and is not in too prostrate a condition, *emetics* are often of service; and *purgatives*, especially croton oil, have proved of great service. *Mercurials*, too, are well spoken of. It is, however, from *direct or surgical means* our chief hopes are to be derived; and passing by the application of alum and nitrate of silver, each of which appears to have been useful in a few cases, we come to *scarification of the infiltrated parts* when accessible. Of seventeen cases in which this was resorted to, twelve recovered, and two were ameliorated, other means being also employed in most of them. In twenty-three instances in which incisions, combined with pressure, were made experimentally after death, the fluid was easily discharged in ten, with difficulty in six, while in seven none flowed out. The scarifications are more likely to prove useful the nearer the œdema approaches the passive condition, less likely when it is dependent upon inflammation of the larynx or throat, especially if this last is violent. They are particularly indicated in the angina coming on in individuals already much debilitated, in which state other means have so little field for employment. Unfortunately, they are inapplicable to the intra-laryngeal form, which is so fatal. M. Sestier describes the mode of scarifying pursued by Lisfranc and Buck; and he proposes two new instruments for facilitating the operation. One of these consists in a myrtle-leaf scarificator cutting at each edge, and the other combines a scarificator and flattened forceps, by means of which scarification and compression of the parts are simultaneously accomplished. He gives representations of these instruments as they are made by Charrière.

When, in spite of all means employed, the disease, as is usually the case, gets progressively worse, time should be endeavoured to be gained by having recourse to *bronchotomy*. This has succeeded in two-fifths (twenty out of fifty) of the cases in which it has been resorted to, while the recoveries of cases in which it has not been had recourse to have amounted to less than a quarter; while, however, it succeeded in little less than two-thirds of the cases occurring in healthy individuals, it saved little more than one-sixth of those already suffering from disease. —*Medico-Chirurgical Review.*

### *Pathological Development of Gas in the Blood.*

A woman, twenty-one years of age, was admitted into the Katherine Hospital, at Stuttgardt, on the 29th of July, 1851, with symptoms of a "gastric fever," of medium intensity, and with some catarrhal affection. At the commencement of the second week the cough was well, the fever trifling, and with a tendency to an intermittent type. Sulphate of quinine was ordered. Three days later, on the 10th of August, the patient was suddenly seized with a convulsive affection, without perfect loss of consciousness; the convulsion lasted about fifteen minutes, and was followed by shivering, heat, and sweating. About an hour afterwards there was bilious vomiting, and a lumbricus was thrown up. The next three days and nights she was tranquil. On the morning of the 12th of August, when visited by the physician, she expressed herself as feeling comfortable; she had eaten her breakfast with some appetite; she was rather giddy when she went to stool, but otherwise had no head symptoms; the tongue was cleaner than the day before; the respiration was perfectly easy; the face was a little flushed; the pulse quick (100), full, and weak. A quarter of an hour later the physician was sent for by the nurse; on his arrival the patient was dead. It appears that the adjoining patients saw her suddenly move in the bed, then become convulsed (apparently like opisthotonos), gasp for breath, sigh, and sink down in bed; all this occurred in about two minutes; she was seen the moment after, but was without sign of life.

The body was opened thirty hours after death, in very hot weather. There was no sign of commencing putrefaction. The brain was quite normal; there was no air in the vessels of the pia mater; there was no fluid in the pleuræ; the lungs were emphysematous, with some lobular collapse; there was no trace of decomposition. In the pericardium there was a little serum.

When the heart was laid bare, a remarkable globular distention and bulging of the right auricle and ventricle were observed; when the operator rather hastily cut into the ventricle, to all appearance a gas issued out, with a hissing noise, as in pneumothorax, and the ventricle collapsed. The ventricle and auricle being fully opened, was found to contain a moderate quantity of coagulated blood in which were no air-bubbles; the endocardium was stained deeply red. The left ventricle showed no distention with gas, like the right side, but there were some little bubbles of gas in the partly coagulated blood. The heart was healthy; in none of the vessels was there any appearance of air. A little frothy blood exuded from the liver on section, but the blood from the other organs was not frothy. The spleen was enlarged and soft. In the ilium there were numerous nodules from infiltration of the solitary glands; Peyer's patches were not much infiltrated, but were rather swollen, and had many dark points. There were many lumbrici in the intestines; the mesenteric glands were generally normal; three or four, corresponding to the lower part of the ilium, were swollen, and had a dark colour. Kidneys, uterus, and ovaries, were normal.

Dr. Cless believes the case to have been one of mild typhus abdominalis (typhoid fever). He remarks that sudden death, with apparently slight symptoms, is not excessively uncommon in this disease, and, after death, nothing may be found except the usual indications of typhus abdominalis. But in more than 1,200 examinations of bodies, in various diseases, he never saw such a collection of air in the heart. This air could scarcely be a product of decomposition, as there was no evidence of such taking place in any other part of the body, and as local decomposition in the heart alone is a thing unknown in the records of post mortem examinations.

A year after this case, a second exactly similar one occurred in the same hospital:—

A girl, fourteen years of age, was admitted on the 16th July, with typhus abdominalis (typhoid fever); the bronchitic complication was severe. Seventeen days after her admission, she appeared extremely well. When visited on the morning of the 2nd of August, she was found to have slept well, and to have no trace of breathlessness or other noticeable symptom. At 7 A.M. she coughed a little, as usual, and put out her hand to take the spitting cup; suddenly, she breathed with great difficulty, became livid in the face, stretched out her arms and fingers spasmodically, and fell back dead. All this did not occupy more than from one to two minutes. On section, twenty-six hours after death, in moderately warm weather, there was no trace of decomposition. Besides the customary appearances of typhoid fever (infiltration of Peyer's patches, enlargement of the spleen), there was air in the large veins of the neck, in the right auricle and ventricle, and in the blood exuding from the liver; and the blood on the right side of the heart also contained air. In the veins of the pia mater there was also air, but Dr. Cless attaches no importance to this common phenomena. The blood throughout the whole body was fluid.—*Medico-Chirurgical Review.*

### *Chorea in a Woman* 83 *Years of Age.*

The following very remarkable case has lately been brought before the "Société des Hôpitaux," by. M. Roger, one of the physicians of the Hôpital des Enfans Malades, in Paris.

Upon the 15th of May last, he was desired to visit Madam ——, aged 83 years and 2 months, who, three or four days previously, had perceived that the movements of the right arm were exaggerated, and not entirely under her control. She had for a long time enjoyed good health, and, considering her advanced age, was a remarkably strong woman. She was conscious of no predisposing cause for the present attack, either moral or physical. M. Roger found the right arm and leg affected with decided chorea. When the arm was extended by the patient, it was either thrust more forward or suddenly drawn back by involuntary contraction. All its movements were irregular and incomplete. The right leg, when lying quietly on the bed, would be drawn up by a sudden contraction, or thrust out in different directions, as it were, at random. A command from the physician, or an effort of will on the part of the patient, could arrest these movements, to recommence, however, almost immediately. She was able, with attention and taking time, to feed herself; the functions of digestion, &c., were healthily performed. In two or three days, the symptoms became considerably aggravated; the movements of the arm and leg were incessant, entirely confined, however, to the right side. Walking became impossible; sleep was greatly interfered with, and she was no longer able to feed herself. She continued in this state for about a fortnight, then she began gradually to improve, and upon the 15th of June, she was quite recovered. The treatment was simple, consisting of oxyde of zinc and belladonna—of the former, from 25 centigrammes to a gramme (15 gr.), of the latter, from 5 to 10 centigrammes. (¼ to ½ a grain). Externally I made applications of chloroform and water, which calmed the pains, and quieted the *agitated movements of the limbs.—Bulletin Général de Thérapeutique, Nov.* 15, 1854.

### *Pleurisy; Empyema; Paracentesis performed three Times; Hydropneumothorax; Canula retained; Iodine Injections every Day for six Months; Cure.*

M. Trousseau presented before the *Société des Hôpitaux* a young patient, the history of whose case he thus briefly relates :—

Upon the 13th of January, 1853, Edm. Berlize, six years of age, was seized with pleuritis, and treated by M. Fleury; the case did not progress favourably, notwithstanding the most active treatment; and towards the end of the month, M. Chomel was called in consultation. The two physicians were now convinced of the existence of a thoracic effusion, which occupied the whole of the right side; there was considerable fever and dyspnœa. Diuretics and counter-irritants were employed with energy; but from day to day the effusion made progress; and towards the end of March, general anasarca came on, accompanied by distressing dyspnœa, and I was called in consultation. We agreed that paracentesis of the chest gave the only prospect of a favourable result; so we immediately performed it, and drew off about two litres, three and a-half pints, nearly, of creamy, inodorous pus. Great relief followed; but fifteen days later, the effusion occupied again the whole of the right pleural cavity; and by the middle of June, the heart and liver were displaced, the gravest results threatened, and the operation being judged necessary a second time, was performed, and followed by the same immediate relief. This time, the pus had an odour of rotten eggs. In the beginning of July, the effusion returned, but there was a tympanitic resonance on the right side under the clavicle. Succussion gave rise to the hypocratic gargouillement, there was evidently an hydropneumothorax. We resolved to wait. But upon the 15th of August, the symptoms had increased to such intensity, that we decided to make a third puncture; but this time to allow the canula to remain, for the purpose of making trial of iodine injections. We drew off again about two litres of horribly fœtid pus, mixed with some bubbles of gas; we introduced into the wound a small conical canula, guarded with a button at its extremity, and closed by a metallic stopper; each morning we withdrew the stopper; first, allowing the escape of the pus, then throwing in an injection, containing 10 grammes (two drachms) of tincture of iodine, 40 grammes of water, and from 20 to 30 centigrammes of iodide of potassium. During six months, the quantity of pus varied from 3 to 9 ounces daily. In general it was not fœtid. Occasionally the pus stopped entirely, then fever supervened, and the air which came from the orifice of the canula was of a horrible odour. About the end of six months, that is, in February, 1854, we perceived that the iodine injections penetrated into the bronchi, and even into the mouth of the child; we then changed the iodine injections for chlorinated water, and afterwards for aromatic wine. Each month we saw the quantity of fluid diminish, the chest contract, and the vertebral column incline to the right side, the strength and appetite improving at the same time. We ordered him a generous diet, and wine of quinine, with fish oil occasionally. Finally, in July, 1854, eleven months since the canula had been fixed in the opening, and eighteen months since the commencement of the disease, we perceived that no more fluid flowed from the wound. In the beginning of September, the secretion seemed altogether to have ceased, and the introduction of a stylet proved that the fistulous opening no longer existed; we then withdrew the canula. The health of the child is now perfectly established. Respiration extends over the whole of the right side. The contractions of the chest, and the curvature of the spinal column, so visible six months ago, diminish daily. Here, then, is a purulent effusion which required three punctures, which was accompanied by a pulmonary perforation, for which more than two hundred iodine injections, and almost as many chlorinated and aromatic injections were used, and above all, in which a perfect cure has been obtained, of which you may now satisfy yourselves. I wish, in conclusion, to call the attention of the Society to the extraordinary quantity of the purulent secretion, which we cannot estimate at less than two hundred grammes each day, during almost two hundred days, that is to say, the enormous weight of 40·000 grammes, or 40 kilogrammes, (39 quarts, 78 pounds). We may conclude, that nourishing and sustaining diet was necessary to withstand this prodigious waste.—*Bulletin Général de Thérapeutique, 15th of November,* 1854.

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## SUMMARY.

*Simulation of Strangulated Hernia by an Acute Hydrocele of the Cord.*—Few questions are of more practical importance than the diagnosis of hernia; we need, therefore, make no apology for the narration of the following case :—

In the evening of November 9th ult., a lad, named Samuel Hood, aged 15, was admitted, under the care of Mr. Curling, for what was supposed to be a strangulated hernia. He had been seen previously by a surgeon, who had told him that such was the case, and, after failing in his attempts at the taxis, had sent him to the hospital. It appeared that, on the morning of the same day, he had been at his usual work as an engineer, and having felt rather suddenly a severe pain in the belly, extending towards the right groin, had examined the part with his hand, and discovered a small swelling in the latter region. The pain increasing, he returned home, and during the afternoon vomiting occurred twice. The bowels had not been open since the preceding day. There was the history, that, at the age of three years, he had been ruptured on the side now affected, but, after wearing a truss for about two years, the bowel had ceased to come down, and he had never since had trouble with it. His countenance was extremely anxious, the whole abdomen tender, and the pulse small and weak. He complained of constant nausea. On examining the groin, an oval tumour, about the size of a pullet's egg, was found, extending from Poupart's ligament into the scrotum. It was very tense and tender to the touch, but received no impulse from the cough. A warm bath was ordered, and a messenger was despatched for Mr. Curling. At seven, P.M. Mr. Curling saw the patient. The more suspicious of the general symptoms had been mitigated by the warm bath, and the tenderness of the belly had quite disappeared. The tumour, however, remained just as it was. On careful examination, the tumour was observed to be almost entirely in the scrotum, having only a very narrow neck of communication with the inguinal canal: it was quite transparent, and transmitted light readily; the testicle was separate, the tumour being at a little distance below it in the scrotum. The pain was localized to the tumour, and did not extend to the abdomen. From this conjunction of conditions, the conclusion arrived at was, that the tumour was an encysted hydrocele, and the following treatment was accordingly adopted:—

Six leeches to the part, and afterwards a bag of ice, were applied; a pill, containing two grains of calomel and one of opium, was ordered to be taken immediately.

The pain was greatly relieved by the leeches, but in the night there was a slight return of vomiting. On the following morning he was in every respect much better, and had had several hours' sleep. The tumour scarcely appeared to be half its former bulk, and the tenderness had much diminished. Urine not having been passed for eighteen hours, it was deemed necessary to introduce the catheter; but some difficulty, on account of spasm, having been encountered, the instrument was withdrawn, and immediately afterwards urine followed. A purgative was ventured on in the evening. On Nov. 11, the bowels acted freely. There was still some swelling about the cord. On Nov. 13, it was thought that the tumour was increasing in size, and the application of the tincture of iodine over it was accordingly ordered. On Nov. 16, he was allowed to leave his bed, wearing a suspensory bandage. A few days later, during an examination in the erect posture, there was found to be a small hernial protrusion in the upper part of the inguinal canal; it was, however, quite distinct from the hydrocele, and could be easily returned.

At the date of discharge, three weeks after admission, the fluid had been all but absorbed from the cyst. A truss was ordered.

We have taken the above particulars from the notes of Mr. Chatterton, the dresser of the patient.

*Remarks.*—Taking into consideration the fact, that a hernial protrusion subsequently showed itself, it occurs as possible that there had been one in the first instance, coincident with the inflammation of the hydrocele sac, and that the acute symptoms present were due in part to both. Supposing that the hernia had been reduced before his admission, either by the lad himself or the surgeon whom he had consulted, the condition present is more easy to be understood than it would otherwise be. The inflammation of the hydrocele might also have been much aggravated by the forcible handling it had been subjected to. It must be admitted, however, as very possible, that the acute inflammation of a serous cyst in such near connexion with the peritonæum as the sac of a hydrocele of the cord, might alone be competent to the production of the condition noted. Whichever explanation be preferred, the case is of much practical interest, and will show the advantage of careful diagnosis. —*Medical Times and Gazette.*

*Poisoning with Hyoscyamus Niger.*—Dr. Schilizzi relates that several persons partook accidentally of a considerable portion of the roots of this plant, which they had supposed to be edible. They were soon seized with symptoms of poisoning, varying in severity according to the quantities taken. Those who had taken a moderate dose presented all the characters of mania; those who had taken rather more became apoplectic, and when this condition passed off showed maniacal symptoms; lastly, those who had partaken largely of the root suffered from tetanic symptoms similar to the effects of strychnine. The quantities taken were not stated.—*Journal de Chimie Médicale.*

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## WHITWORTH MEDICAL AND HARDWICKE FEVER HOSPITAL.

### *Clinical Observations on the Treatment of Dropsy connected with "Bright's Disease of the Kidney" by Iodide of Potassium; its Mode of Action; Analogy in Action with Mercury; Advantages of Iodide of Potassium over Mercury; Gargle for Mercurial Sore Mouth; Treatment of œdematous Scrotum.*

BY DOCTOR CORRIGAN,

PHYSICIAN IN ORDINARY TO THE QUEEN IN IRELAND, ETC.

IN a paper on the treatment of albuminuria by the administration of preparations of iron, published in the Dublin Quarterly Journal, Dr. Lees has observed, that although modern researches have thrown much light upon the pathology and diagnosis of diseases of the kidneys, particularly of those forms designated as Bright's diseases, "yet we must admit that corresponding improvements in treatment have not appeared to keep pace with our knowledge of their pathology." It is with the object of offering a contribution to improvement in the treatment of some forms of albuminuria and the dropsy connected with it, that I desire to draw attention to the use of iodide of potassium. Dr. Lees has, in the paper above quoted from, shown the great benefit in treatment that may be expected in many instances from the use of preparations of iron, of which he appears to prefer the ammonio-tartrate. I would add to the list of remedies the iodide of potassium. I believe that in many cases its exhibition will remove, steadily and certainly, the dropsy that accompanies albuminuria, and will very much improve the quality of the urine, so that it will be found, in the treatment of cases of Bright's diseases, one of our most valuable medicines. What may be the extent of its action upon the structural change going on in the kidney, I would not at present venture to pronounce a positive opinion; but judging from its effect upon the urine, and from analogy as to its power in arresting, and even removing, interstitial depositions in other organs, I think it would not be rash to infer that it has the power, not only of arresting, but to a great extent removing, the peculiar interstitial deposition that is found in the kidney in some forms of Bright's kidney. I have already, in former numbers of this journal, and at meetings of the Pathological Society (*vide* DUBLIN HOSPITAL GAZETTE), Dec. 1854, brought forward cases in support of a view that I have long advocated, that there are two essentially distinct diseases of the kidney, designated as Bright's disease, and described as only differing in being two stages of the one disease—the first stage being described as enlargement, the second as contraction. That the kidney, like the liver, may at first enlarge, or be hypertrophied, and that it may afterwards contract, I would not venture to deny; but this is quite different from its being laid down, as it generally is, that the contraction is in every case the second stage of the enlargement, and that to this contraction the first stage, or that of enlargement, must progress. It is to this I would object, and not to occupy too much time in pathology, in a lecture devoted principally to treatment, I would at once say, that I believe the two diseased states of the kidney, of which there are illustrations before us, have no necessary connexion with one another.

The first is a kidney much enlarged in size, pale yellow in its substance and on its surface, smooth and brittle in its texture, and with its capsule loosely attached and readily peeling off, attaining its size and deriving its appearance from the interstitial deposition, as far as we know, of a mixture of fat and morbid fibrine.

The second is that form of pathological alteration that I would designate as cirrhosis, in which the organ, from the contracted action set up in its cellular matrix, goes on diminishing in size until at last its vascular and secretory tubes are contracted so as to be completely choked up. It is not probable that in the latter form of disease we can effect much by treatment; but reasoning from analogy, there seems no good reason that we should not be able in cases of the former to remove again and again the consequent dropsy, and even to arrest and also to effect the absorption of the interstitial deposition which constitutes the morbid change in the kidney. I have said from analogy, for we know that in instances of the corresponding interstitial deposition of pale yellow fibrine and oil in the liver, constituting this large yellow liver, it is possible not only to remove repeatedly the consequent dropsy, but even to reduce the liver to its healthy size, where the enlargement had been very considerable. The dropsy, in most cases of enlarged liver, is not so much dependent upon any mechanical obstruction, as upon extended irritation, just as we see effusion into the tunica vaginalis the result of low testitis; hence it is, that we are able to remove so effectually the dropsy attendant on the large yellow liver, and that this is the nature of the dropsy accompanying this state of the liver is further proved by the fact, that the enlarged yellow liver will continue for many years without any diminution of its size; but nevertheless, without any return of the dropsy. It was a consideration of this analogy of the large yellow kidney being, like a similar change in the liver, a peculiar pathological state, and not merely the first of the stage of the one disease, and of the dropsy not being dependent, as in cirrhosis of the liver and kidney, upon gradually accumulating contraction, that led me to employ iodide of potassium in its treatment. We all know the very active power of this agent in acting upon the function of secretion in removing the interstitial depositions in periostitis and effusion into joints, and I was led to hope it might, from those qualities, be found useful in one form of Bright's disease. In the first case in which I ever employed it, there was not only the usual dropsy and anæmic condition dependent upon Bright's disease, but the periosteum of the tibia had become thickened, and effusion took place into the knee joints. It was mainly for this latter affection I first prescribed it, and its good effect was remarkable not only upon the joints and periosteum, but upon the general anasarca. That the iodide of potassium would not only cure for the time being, but would prevent a relapse of the disease, would be too much to say of any medicine. It does not diminish our trust in mercury, that secondary symptoms will return even after the system has been apparently fully saturated with the antidote. It will, I hope, be sufficient to recommend iodide of potassium to notice, as a remedy for albuminuria and its consequent dropsy, to say that in some cases it seems to effect a cure, and that in many cases it will be found to remove again and again the secondary dropsy. I have already observed, that it was not mere empiricism but reflection upon the power of iodide of potassium over the function of secretion and absorption that led me to its employment. The above observations, it is scarcely necessary to say, have reference to the treatment of the disease only in its sub-acute or chronic form.

I shall now relate some of the cases noted by Mr. Currin, Clinical Clerk.

Case I.—Francis J. Hedley, formerly a soldier, æt. 38 years, admitted into No. 2 Ward, Whitworth Hospital, August 28th, 1854.

On admission he presented a very anæmic appearance, his lower extremities and entire body enormously œdematous, and there was considerable effusion into the peritoneum; the scrotum also was very much distended, almost to bursting; the surface of the body was dry, the upper extremities were emaciated and free from anasarca.

He complained of dyspnœa, great debility, increased action of the heart, and a liability to catch cold on the slightest exposure; he suffered also from constant dull pains in the lumbar regions, which extended down into the testicles and groin. At the period of his admission the appetite was good; he was, however, occasionally subject to nausea and slight retching in the mornings. He complained much that he never of late enjoyed natural, refreshing sleep; it has been uncertain and disturbed by dreams. He was inclined to be very drowsy and stupid; the bowels were constipated, and required a very brisk purge to give a free motion. Pulse small and weak, eighty per minute. He passed about two and a-half pints of pale-coloured urine per day, which, when shaken, frothed up like beer. On testing it with heat and nitric acid it was found to be very albuminous, fully a third of the fluid tested being converted into a mass of albumen; its sp. gr. was 1.010.

He states that, up to the period of his illness, he had led an intemperate life, had served several years in India, and had been exposed to great hardships there. He was attacked in April, 1852, at Rangoon, with dysentery, from which he slowly recovered; after this he was subject to repeated attacks of diarrhœa up to the month of January, 1853, when, for the first time, he perceived his feet and ankles to swell. About this time his urine was diminished in quantity, of a blood red colour, and he experienced a frequency and some pain in voiding it; since then the swelling has slowly advanced, extending up the legs and thighs, and finally reaching the abdomen, which latter became greatly distended. His general health became impaired, and he was dismissed from the service. From the first appearance of the anasarca up to the time of his admission, he has never been free from it; it has gradually progressed until it has arrived at its present state, the legs and thighs being now nearly twice their natural size, and presenting a white, glistening appearance.

From the time he became ill up to the present, he has been under various modes of treatment.

*Treatment.*—August 29th.—Ordered potassæ sup. tart. ℥ss., statim sumend.

August 30th.—Repetatur pulvis.

August 31st.—He states, that he has derived much benefit from the powders; they not only gave him free stools, but also acted as a diuretic.

Repetatur pulvis.

September 3rd.—Bowels constipated to day, and he is suffering a good deal from flatus. Ordered:

℞. Spt. terebinthinæ, ʒij.
Olei ricini, ʒvj. M.
Ft. haustus, statim sumend.

September 4th.—Much better.

Rep. pulvis supertart.

The cream of tartar was continued with good effect for a few days longer.

September 7th.—Ordered: ℞. Misturæ Iodidi Potassii ℥i. ter in die; 5 grs. of iodide and 5 grs. of bicarbonate of potass. Each oz. of this mixture contains a teaspooonful of confection of jalap, pro re natâ. He was also ordered, Lotionis nitratis argenti ℥ij. (gr. x. ad ℥i.) to paint with a camel-hair brush over the distended scrotum.

This treatment was continued for a fortnight, when the swelling was found much reduced; the scrotum had contracted to its natural dimensions.

September 22nd.—His general health much improved; urine still very albuminous, sp. gr. 1·012. He was allowed generous diet, mutton chop for dinner, &c. The same treatment to be continued, only that 3 grs. additional of iodide of potassium were ordered to each ounce of the mixture.

He continued taking the iodide regularly, and the confection of jalap every night, or when necessary, up to the 10th October, when the anasarca was found to have almost disappeared, with the exception of a slight pitting about the ankles; the ascites has entirely disappeared; he now rests well; he does not suffer much from the lumbar pains, nor from dyspeptic symptoms; he says he is quite well and wishes to be allowed to get up. Ordered to continue the iodide, and to have a tepid bath twice per week.

October 12th.—Much improved, and a great deal stronger; the anasarca now only perceptible about the ankles towards evening, after walking about during the day; no appearance of it whilst he continues in bed. The urine, on being tested, was found to be only a little hazy, and did not form a jelly as before; its sp. gr. has risen to 1·018.

Rep. mist. iod. potassii.

October 20th.—He has continued to improve rapidly; the appearance of health is returning to his countenance, and he has lost the anæmic condition which he had on admission. The albumen is now scarcely perceptible in the urine, and the sp. gr. is as high as 1·025; once within the last few days it was found as high as 1·028; the sp. gr. of late has been variable, but still of a natural standard.

October 25th.—No appearance of any anasarca now. The urine continues free from albumen, and of a high sp. gr. To-day it was tested for iodine with starch and nitric acid, which threw down a dark blue precipitate.

October 31st.—He has continued well. The condition of urine same as on the 25th inst. He was discharged to-day.

CASE II.—John Claffey, æt. 39, labourer, admitted into hospital, October 3rd, 1854.

On admission, he presented a pale appearance, the lower extremities were very œdematous, being swollen to nearly twice their natural thickness; he laboured under ascites also and œdema of the scrotum.

He complained of debility, languor, and drowsiness, with a dull pain in the head; he states, that he spends very restless nights, and his sleep is disturbed by unpleasant dreams; at present he does not suffer from lumbar pains, he is more free from pain now than he was some months ago; he has wasted greatly in flesh; he does not suffer much sickness, slight nausea only being present in the morning; bowels costive, urine scanty, high-coloured and frothy, slightly albuminous, sp. gr. 1·012.

He states that the disease set in very insidiously, ten months ago; he became dull and heavy, his back was painful; in the course of a few weeks, the flow of urine became very scanty and of a dark red colour; he experienced pain and frequency in micturition; he soon after began to feel pains in the loins, which shot down the thighs nearly to the knees, but not into the testicles. In consequence of his increasing weakness he was obliged to give up work long before any swelling set in; he was occasionally subject to diarrhœa since he took ill; at other times the bowels were very costive. He says he had been temperate during the last eight or ten years. The feet and ankles first swelled about two months before admission, and in a short time after the abdomen also swelled.

*Treatment.*—The same treatment was adopted in this as in Hedley's case; the progress towards cure, however, in this has been more rapid than in the former case.

October 25th.—The anasarca has now almost disappeared; there is still a little fluid in the peritoneal sac, the urine scarcely becomes at all turbid by the action of the heat and nitric acid; sp. gr. 1·022. Iodine was present in the urine in this case also. He was discharged on the 3rd December, free from all swelling.

Case III.—Patrick Dermott, æt. 50, labourer, Co. Louth, admitted into No. 2 Ward, Whitworth Hospital, June 7th, 1854.

He does not present a very unhealthy aspect; his countenance is a little pale; he does not suffer much constitutional disturbance; he complains of languor, increasing debility, and unfitness for labour; also of dull, obscure pains, or rather a feeling of weakness in the back. His most urgent symptoms, and those of which he complains most, are anasarca, and weakness of the lower extremities, and œdema of the scrotum. He is much depressed in spirits, as he feels strongly impressed with the idea that he labours under an incurable disease, some member of his family (his wife) having died of this affection.

He states, that the disease set in rather insidiously, and he cannot well trace it to its commencement; it has been of considerable duration, and he has been several times under medical treatment without, as he thinks, getting much better.

The urine was albuminous, and of low sp. gr. 1·009.

On admission, he was well purged for a few days, and then ordered fifteen drops of muriated tincture of iron three times daily; elaterium in one-sixth of a grain doses was ordered to him as a purge. This treatment was continued without any improvement in the urine, or relief from the anasarca up to the 20th June, when he was put on digitalis, and brisk cathartics. This was continued up to the 28th June, still without any marked benefit. He was then (28th June) ordered 5 gr. doses of iodide of potassium three times per day, and confect. of jalap when necessary.

July 1st.—He is much improved to day, the œdema has entirely left the scrotum, and there is scarcely any appearance of anasarca anywhere, except a slight pitting towards evening about the ankles. Urine still continues albuminous, though to a much less extent; sp. gr. 1·012. He was allowed to walk about a little every day, and to have a warm bath occasionally, and directed to continue taking the iodide of potassium as before.

July 14th.—Anasarca now entirely gone; he is able to walk about all day without any return of it in the evening; general health much improved. Urine still a little hazy; sp. gr. 1·015.

July 17th.—There has been no return of the anasarca since last report; the urine is scarcely discoloured now by the action of heat and nitric acid; sp. gr. 1·018. He states, that he feels himself now quite well, and wishes to return home.

He was discharged to day from hospital.

Case IV.—Eliza Rooney, æt. 24, servant, admitted into Whitworth Hospital, July 18th, 1854.

On admission, she presented a very unhealthy appearance; her countenance was pale and bloodless, face somewhat swollen; she was labouring under anasarca of the entire body and lower extremities, also ascites to a considerable degree; œdema of late has been becoming very extensive, extending all over the chest. She was suffering from an uneasy sensation, or rather a feeling of weakness in the back, a considerable amount of stomachic derangement, great thirst, and an uncontrollable diarrhœa; there was also a good deal of fever present, headache, and drowsiness, skin hot and dry, pulse small and weak, 120 per minute.

The urine on being examined was found to be of a pale colour, highly albuminous and of low specific gravity, 1·008. She passed a natural quantity, nearly three pints daily.

She states that a considerable time ago she perceived her feet and ankles to swell towards evening; a short time previous to their swelling she experienced pains in the loins. About a month after the swelling first appeared, her general health became impaired, nausea and sickness of stomach set in; she continued thus getting worse, when lately an increase of swelling and an exhausting diarrhœa forced her to apply for relief.

*Treatment.*—July 18th. On admission, her most urgent symptoms were first treated with the usual remedies; with considerable difficulty the diarrhœa was checked, and for some time after admission she was subject to repeated feverish attacks.

July 30th. She was ordered:

℞. Tinct. ferri mur. guttas xv. ter in die
in cyatho aquæ vinoso.

She was continued on the iron treatment (the muriated tincture being latterly changed to the tartrate of iron) for about three weeks, without any marked benefit; the ascites and anasarca, however, were a little diminished, but the urine remained as before.

Aug. 20th.—Ordered:

℞. Mist. digitalis diuret. ℥x.
St. ℥i. ter in die.
℞. Potassii sup. tart. ℥ss.
Nocte sumend.

She continued taking the digitalis every day, and the cr. tartar every second day for about ten days, with slight improvement in the dropsy, but little or none in the urine, which still continued very albuminous, and of a very low sp. gr. 1·009.

September 2nd.—Ordered:

℞. Mist. iod. potassii, ℥ x.
St. ℥i. quater in die.
Rep. potassæ sup. tart. et habeat
bal. tepid. p. r. n.

This treatment was persevered in for a month with marked benefit, when the following was her condition :—

October 1st.—Ascites entirely removed; the anasarca has disappeared, except from about the ankles, where there is still some pitting on pressure; general health much improved; urine still albuminous, but not to such an extent as formerly; sp. gr. 1·012. She was ordered to continue the same treatment as before.

October 12th.—Much improved, there is now no appearance of swelling in the mornings; towards evening, and after walking about during the day, there is slight œdema of the ankles; general health good; urine only a little hazy, by the action of heat and nitric acid; sp. gr. 1·015.

Ordered to continue the iodide of potassium.

October 19th.—Her condition is much the same as when last report was taken. She was discharged to-day in consequence of quarrelling with another patient.

The third case narrated above, Patrick Dermott, has again come under our observation. He was discharged, as Mr. Currin's note states, quite well, on the 17th last July, and returned to the country. On the 3rd November, he applied again for admission to the hospital in the following state :—He does not present such an unhealthy appearance as when formerly admitted; his countenance is more florid, but the face is considerably swollen, with a good deal of puffiness under the jaws, and the abdomen much distended; the lower extremities are very anasarcous. He does not, however, suffer from pain in any part, nor from frequency of micturition, and he says, that if it were not for the dropsical swelling, he would be quite well. He passes about two and a-half pints of urine per day; it is pale straw colour, containing albumen in large quantity, and with a sp. gr. of 1·013. He says that from the date of his discharge, 17th July, up to five days previous to admission, he remained quite free from any anasarca, and he attributes his present attack to having walked a considerable distance about five days before, after which he felt himself very ill, and the legs and scrotum quickly afterwards became anasarcous. He was ordered cream of tartar as a purgative in two drachm doses, to have the scrotum painted over with solution of nitrate of silver, 10 grs. in ℥i., and afterwards 10 grs. of iodide of potassium ter in die. Under this treatment he continued to improve rapidly.

Dec. 23rd.—He is now quite free from all œdema, his general health good, sleep natural, and he says he is quite well. The urine, however, still contains some albumen, but its sp. gr. is 1·025.

We shall keep him in hospital for some little time longer, to have him under observation.

Mercury and iodide of potassium appear to have many points of resemblance in their properties acting mainly on the function of secretion and nutrition, and in their determination towards the salivary glands; but iodide of potassium has some superior advantages. It does not wreck the constitution like mercury, nor expose the patient to serious injury from exposure to cold; and the sponginess of gum and secretion of saliva caused by it never occasion the amount of injury resulting occasionally from the action of mercury on the mouth. In Bright's disease the action of mercury on the mouth is peculiarly to be dreaded; of all mercurial mouths, that occurring in Bright's disease is the most unpleasant and the most intractable. The breath acquires a peculiarly characteristic and offensive odour, and the ulceration is very difficult to heal. One of the most useful gargles in this unmanageable sore mouth will be the repeated use of a *very weak solution* of nitrate of silver, half a grain to the ounce. In this strength the patient is not pained by it, and can use it very frequently without inconvenience, and it exercises a very astringent action on the mucous membrane.

It is scarcely necessary to observe, that in all the cases the iodine was readily detected in the urine by the usual tests of nitric acid and starch. Of the dose and mode of administration of the iodide of potassium I have only to observe, that the usual dose given is five grains ter in die, with five grains of bicarbonate of potass in combination, which appears to have the power of preventing the iodide from irritating the stomach or causing diarrhœa. In some cases we occasionally increase the dose to ten grains, similarly guarded, twice or thrice a day, and the medicine requires occasionally to be continued for several weeks.

The enlargement of the scrotum is often a troublesome complication, the flaccidity of the skin remaining after the effusion has disappeared. For this affection, a lotion of nitrate of silver, ten grains to the ounce, will be found most useful. It is to be washed over the scrotum with a camel's hair pencil every day until the scrotum becomes brown and the cuticle thickened. The stimulation effects contraction of whole skin. There remains one question more suggesting itself. Can we distinguish those cases beforehand of Bright's kidney, in which we may predict that iodide of potassium will be useful? I cannot as yet answer this question. It will next engage my attention; but in the mean time this uncertainty is of no practical disadvantage. If we fail in our treatment, from using it in a form in which it does not cure, we have done no injury to the constitution, which we could not say of mercury had we employed it as our remedial agent.

## MEATH HOSPITAL.

### *Case of Cancer of the Peritoneum and Stomach, with Observations.*

BY DR. LEES,

PHYSICIAN TO THE HOSPITAL.

*Reported by* MR. HENRY USSHER.

Eliza Kelly, a cook, æt. 50, unmarried, was admitted to the Meath Hospital, complaining of vomiting after food. She was greatly emaciated, and stated that she had always enjoyed good health till twelve months ago, when she was taken ill with pain in the stomach, and right hypochondrium, great thirst, flatulence, vomiting, and confined bowels, but of which she was cured in a few days. She continued in good health till two months ago, when she began to vomit some time after food; at first it only occurred once a week, but latterly has been more frequent, so that now it occurs every day; the matters vomited are occasionally of a dark colour, resembling coffee-grounds. About this time she discovered a swelling in her epigastrium, which has been increasing gradually. On admission, her skin was of a dirty yellow colour, the tongue clean and moist, but covered with apthous ulcerations; there was a large, hard tumour, extending from the right hypochondrium into the left, having a strong pulsation, and being tender on pressure. She sleeps well, but has nightly perspirations, bowels generally costive, urine scanty, loaded with lithates. She was merely treated with palliatives, and sunk gradually in a few days. On examination after death, some very turbid fluid was found in the peritoneum, a small abscess was seated in the epigastrium, apparently on the anterior surface of the liver, but separated from it by a thick cyst, being really seated between the layers of the falciform ligament. The great omentum was very vascular, covered with innumerable miliary granulations, under the serous membrane, and mixed with a quantity of fat, but corrugated up, so as to form the hard tumour felt during life. The intestines and mesentery were also vascular, and covered with cancerous granulations. On opening the stomach a large scirrhous mass extended along the lesser curvature round the pylorus, and in the commencement of the duodenum there existed ulceration, which communicated with the abscess in the epigastrium.

Cancer may occur as a primary affection of the peritoneum, that is, independent of any other lesion, but this is very seldom met with, and when it assumes the granular form, is often very difficult of detection, as it may be only indicated by the presence of ascites. It may also assume the appearance of hard white patches, like pieces of wax, or it may form large encephaloid or scirrhous tumours, though this form generally commences in the cellular tissue behind the peritoneum, constituting the retro-peritoneal cancer of Lobstein, which chiefly occupies the glands of the lumbar region, or other portions of the absorbent system, often reaching a very large size, and for a long period may not cause any pain or disturbance of the system; but eventually they cause much distress by their mechanical action interfering with the functions of the organs in their vicinity, and though generally easily recognized, yet in some cases they occasion some difficulty in their diagnosis, as occurred in a case admitted some time ago to the Meath Hospital, of a man æt. 46, who was sent into the hospital by a very well informed physician, who supposed him to be affected with an aneurism of the abdominal aorta, as he had a tumour in the epigastrium with a strong diastolic pulsation and murmur, but which was found on dissection to be caused by a mass of cancerous glands which enveloped the aorta, and thus had an eccentric pulsation communicated to them on all sides, so as to simulate the diastolic pulsation of an aneurism. Rokitañsky states, that "the most common form of carcinoma in the peritoneum is the areolar, which appears as a hard, crystalline, transparent, and discrete cancerous follicle, resembling tubercle, and of the size of a hemp or millet seed; in the acute variety, it is generally thickly sown over a large extent, and even spreads over the entire peritoneum, or it occurs as a layer of areolar cancerous tissue, varying in thickness, or as a circumscribed, round, lobulated aggregation." Another variety of cancer which we meet with in the peritoneum, is that termed colloid, which consists of a semi-transparent, jelly-like substance contained in cells, and which may form a distinct solitary tumour, or may infiltrate the tissue of the part, and present the aspect of a tremulous jelly, simulating ascites, remarkable examples of which have been exhibited at the Pathological Society by Drs. Banks and Corrigan.

In most of these cases, however, cancer of the peritoneum is a secondary affection caused by the extension of some cancerous growth from the liver, kidney, uterus, ovary, or pancreas, which, though originally generated external to it, yet perforates it, and penetrating into its cavity, finally involves it in its metamorphosis, or it may occur (as in the case I have detailed) secondary to carcinoma of the stomach, and may then be regarded as the result of a cancerous cachexia. The condition of the omentum in this case is also worth remarking, as some of the senior students were at a loss to account for the presence of such a large pulsating tumour in the upper regions of the abdomen; it was thought at first that it might be an abscess of the liver, and the profuse nightly perspirations appeared to countenance this idea; but a more accurate examination of the tumour, its shape, its great hardness, and the fact of there being resonance on percussion between its upper surface and the margin of the ribs, satisfied me that the tumour which we felt was caused by some morbid growth independent of the liver, and due to the deposition of either cancerous or tubercular formation in the omentum. The age of the patient, the history of the case, but above all, the absence of any evidence of tubercular disease in the lungs, led me to make the diagnosis of cancer. The seat of the abscess, between the folds of the falciform ligament, and resting on the anterior surface of the liver, led us to think, on opening the cavity of the abdomen, that we really had met with an abscess of the liver, and were the physical signs of an abscess in that situation better marked during life, might have justified us in looking for matter; but its communication with the duodenum through the ulceration of that intestine would probably have caused a fistulous communication through the external opening, if one had been made, and thus have given rise to a very unexpected and unusual complication of carcinoma.

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## Case of Congenital Malformation of the Hand, with Remarks.

BY A. BEAUFORT BRABAZON,

SENIOR DEMONSTRATOR OF ANATOMY, TRINITY COLLEGE MEDICAL SCHOOL.

Congenital malformations, affecting either the trunk or extremities, must always be matters of practical interest to the surgeon, for there are no cases in which operative measures are so eagerly sought after and almost demanded, both by the parents of the afflicted individuals, and by the individuals themselves, when arrived at a sufficient age to understand the "stigma," which unfortunately and unjustly is affixed to deformity. Many a naturally vigorous intellect has become dull and obtuse, and many a naturally fine disposition been rendered absolutely misanthropical, by continually brooding over unsightly malformations, which, particularly among the lower classes, render these unfortunates objects of contempt and ridicule; but which, by timely surgical interference, might have been altogether or in great measure removed.

I was lately requested to visit a child, aged twelve months, a little girl, to see if anything could be done to remedy a deformity of the hand, or as the child's father expressed it, "webbed fingers." Before seeing the child, I expected to find nothing more than a persistence of the interdigital membrane, which is often found between the fingers after birth, to an unusual extent, and I anticipated an easy cure by its removal or division; however, on seeing the child, I was greatly disappointed at finding a much more difficult and unusual condition of parts. The left hand presented considerable deformity, resembling the paddle of a seal, rather than the hand of a human being; on the palmar surface, there was no trace of interdigital depression, and scarcely any on the dorsal aspect, the power of opposing the thumb to the fingers did not exist, and the movement of the fingers were performed *en masse*, and were limited to flexion and extension. The thumb and index finger were connected by a structure much denser than the ordinary interdigital membrane; the index and middle fingers were closely connected up to the carpal extremity of the second phalanx; the second phalanges were inseparably connected, and there was but one ungual phalanx, and one nail for both fingers; the middle finger and the ring finger were also inseparably and immoveably connected, but the nails were distinct, and the little finger was closely connected to the ring finger, but the nail was distinct, and there was slight motion permitted between them. The parents of the child stated, that at birth the index and ring finger were inseparably united, but that the other fingers were connected by merely a thin transparent membrane; since then the fingers "grew together" in the manner in which I found them. When the child was three months old, they brought her to a surgeon, who declined to undertake operative measures until she was twelve months old. It was evident, that any attempt at separation of the middle finger from the index or ring finger, would be worse than useless, owing to the closeness of their union and to the immediate proximity of the phalangeal articulation; and in this opinion Mr. Adams, whom I consulted upon the subject, concurred; the permanent separation of the little finger from the ring finger also seemed hopeless, but there was every probability of giving perfect freedom to the movements of the thumb, so indispensably necessary to the utility of the hand. This object I attained by completely excising the connecting structure, which I found to be not merely thin membrane, but strong semi-cartilaginous structure. The parents were so well pleased by the result of the operation, that they insisted upon my attempting the separation of the little from the ring finger, which I did greatly against my own inclination, as I did not anticipate a very favourable result; I found the connecting medium here to be almost semi-cartilaginous, and the part took a long time to cicatrize; the result, however, was more favourable than I at first expected.

In the following particulars this case may perhaps be considered worth attention.

1. Congenital malformations of the upper extremity, as contrasted with the lower, are comparatively rare, and have not attracted the notice of surgical writers, as much as those of the lower extremity.

2. The case presents an example, I think unique, of the presence in the same members of

the three forms of congenital anchylosis described by Chelius, viz., membranous, cartilaginous, and osseous.

3. The cause of the malformation is interesting, as it appears to be partly owing to arrest of development in the complete formation of the extremity *in utero*. The fingers are normally developed separately; in this case, the index and middle finger, appear to have been developed in part collectively, as indicated by the existence of only one ungual phalanx, and one nail for both fingers.

4. Congenital malformation of the hand follows the law of other congenital malformations, representing the natural condition of the limb in lower animals, the persistence of the interdigital membrane producing an accurate resemblance to the limb of the cheiroptera.

5. It does not appear to be advisable, in this variety of congenital malformation, to defer operative measures until after the period of primary dentition, as recommended in other instances by Sir A. Cooper and many surgeons, for the connecting membrane appears to degenerate into a fibro-cartilaginous structure, connecting the fingers more closely and inseparably as the child grows older.

In all such cases, I need scarcely mention the paramount importance of securing the independent movement of the thumb; by so doing, although we cannot always completely remove deformity, we can at least render the limb a "useful member of society."

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## PATHOLOGICAL SOCIETY MEETING.

*December 9th*, 1854.

DR. ADAMS IN THE CHAIR.

### *Tubercular Perforation of the Intestine.*

DR. LEES exhibited a specimen of intestinal perforation, which was found in a male subject, (æt. 60), brought for dissection to the School of Medicine, Peter-street, and he was indebted to Mr. Evan Thomas Evans for being able to bring it before the Society. On opening the abdomen, the intestines and solid viscera were found agglutinated together, owing to chronic peritoneal tuberculosis, but, superadded to this, were traces of recent peritonitis, particularly evident in the ilio-cæcal region, and in the pelvis, the cause of which was discovered to be a perforation in the lower third of the ileum. On opening this intestine, several ragged oval-shaped ulcers were found occupying the seat of Peyer's glands, their margins were rounded and indurated, their base formed, either by the submucous cellular tissue condensed, or by the granulated texture of the parietes of the dilated follicles. One of these ulcers extended in the direction of the intestinal circumference, and in the centre was a large perforation the size of a fourpence, as if the piece had been cut out; the mesenteric glands were enlarged and full of tubercular matter, some in a cheesy, others in a concrete state. The recent lymph on the mesentery, and on the abdominal parietes, was stained of a dark black colour, but which could be scraped off with it, and did not extend to the peritoneum. The spleen was less than the natural size. There were also extensive tubercular depositions in the lungs, many in a state of calcareous concretion, but no cavities, though the left lung was softened and so firmly adherent to the costal pleura, that it tore upon attempting to remove it. Dr. Lees considered the specimen valuable, as illustrating an uncommon termination of a very common disease; for although death from tuberculosis of the lungs, with diarrhœa, is a subject of daily occurrence, yet no specimen of perforation of the intestine during the course of that disease had ever (as far as he was aware) been exhibited at the Pathological Society. He observed, that perforation of the intestine during the course of acute follicular enteritis, was not an unfrequent occurrence; but the ulcer in this disease differed from that of the one he exhibited, by its position, as its large diameter is always parallel to the longitudinal axis of the intestine, the typhous ulcer scarcely ever forming a zone, but in this specimen the ulcer had enlarged in the direction of the intestinal circumference, having a sinuous margin formed of mucous membrane, without any trace of inflammation. With regard to the peculiar dark appearance of the lymph effused on the surface of the peritoneum, he had asked Mr. Thomas Hayden to examine it for him, and he was furnished by him with this account of it:—

"I have examined the black matter found on the peritoneal surface of the subject affected with tubercular peritonitis; this matter consisted of *blood globules* in immense numbers, with pigmentary granules deposited on their *exterior*. The pigment appeared also in isolated masses."

"It appears to me, that blood was effused into the peritoneal sac, either by exudation, or as a consequence of perforation of the intestine; that the gases which also entered through the intestinal perforation acted on the blood, so as to impart a black colour to it, as in ordinary intestinal hæmorrhage, and that this blood, so altered in colour, became diffused over the entire peritoneal surface already coated with lymph. This, however, I offer merely as a conjecture."

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